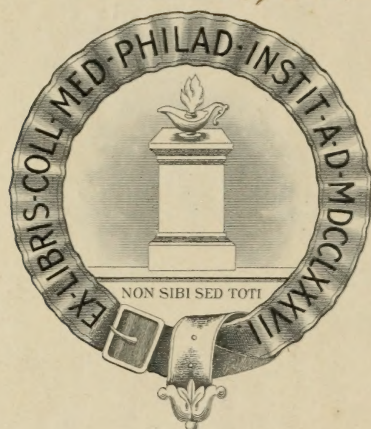


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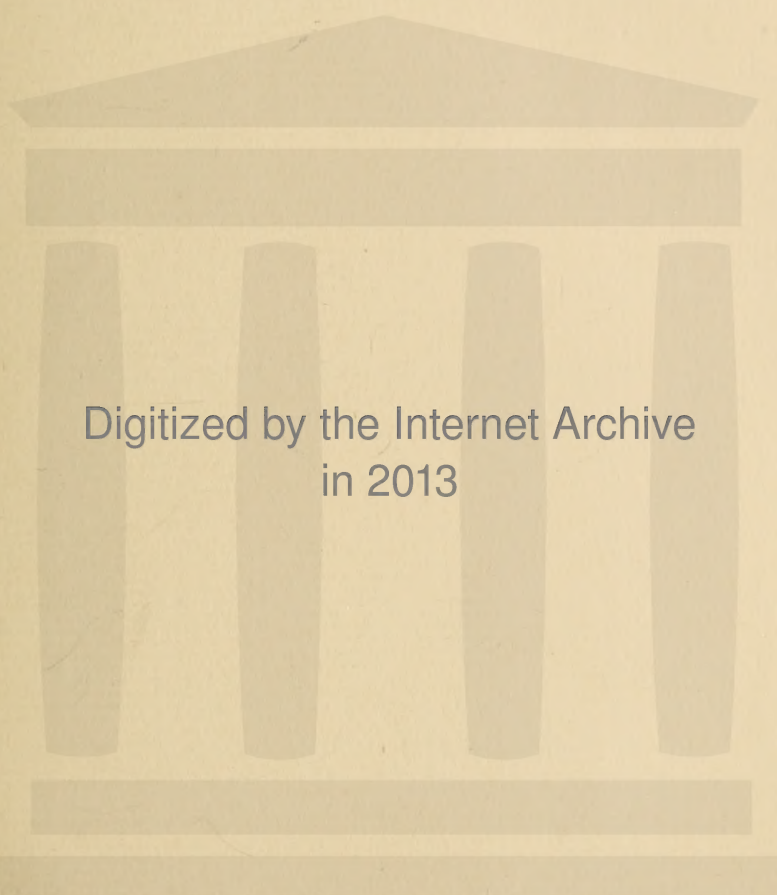


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FIFTY-FOURTH ANNUAL SESSION

THE RECOGNITION AND TREATMENT OF FLAT-FOOT.

BY

JOHN A. BROOKE, M.D., PHILADELPHIA, PA.

FLAT-FOOT, weak foot or foot strain as a cause of pain in the lower extremities or even in the back is often overlooked. The pain in the feet and legs is usually classed in that rather vague term rheumatism. It is true that foot strain does sometimes favor a mild or a subacute arthritis and synovitis but this is not generally the case.

The rather indifferent attitude taken by the average doctor toward these cases and his none to careful way of prescribing for them is responsible for the thousand and one arch supporters and other devices so extensively advertised for the magic relief of flat-foot. If there is a distinct flat-foot, a condition that is not very painful or a pronation of the foot, the deformity is recognized and directions given to go somewhere and get a pair of arch supporters, without much thought as to the condition present or what is needed to correct it. It is about as reasonable to expect good results from glasses furnished by the average jeweler or peddler in glasses for

errors in refraction, as it is to secure a satisfactory result in flat-foot by the selection of arch supports in the average shoe store or where some purchase them, in Woolworth's.

The contributing causes of flat-foot are many. Systemic conditions are often a predisposing factor; toxemias, infections, excessive weight or anything that brings the condition below par may cause muscle weakness and ligament relaxation. More cases occur in the Spring when the general condition is more likely to be under normal and tissues are less resistant to strain. Nurses, clerks in stores, policemen and persons who stand for many hours at a time are especially prone. The act of standing is primarily a passive one, as long as an absolute equilibrium is maintained, the strain is placed mainly upon the ligaments and slightly upon the taut but inactive muscles. In walking and running the conditions are reversed, the work is done largely by the muscles supported to a certain extent by the ligaments.

The body weight is sustained through two pillars, the small under surface of the os calcis and the distal end of the meta-tarsals and the phalanges, these supported by the longitudinal arch of the foot. The normal plane of weight bearing should fall from the hip through the centre of the patella, the tibia at its lower end and extend forward through the second toe. If through muscular weakness, relaxed ligaments, knock-knees, faulty shoes or the pernicious habit of toeing out, the line of weight bearing is thrown inside the normal plane then undue strain is thrown on the ligaments and fascia on the inside of the foot.

The old military rule, as well as that taught by teachers in physical training in schools was that the proper attitude for standing was with the heels near together and the feet diverging at an angle of from 60 to 90 degrees; this attitude of out-toeing is a very prolific cause of foot strain and later real flat-foot. The force of the body weight is oblique to the foot and an inward cross strain is produced. The position of the leg in which the toes are outside of the line of progression shortens the stride and lessens the important element of thrust. Savages who never have worn shoes toe in and athletes apparently gain in propulsive power by so doing. When the legs are externally rotated the knees are subjected to a twisting force and joint strain and outward rotation of the femur favors a backward rotation of the pelvis on its

transverse axis and a consequent decrease of the normal lordosis. The out toeing is an important factor in the production of the hallux valgus (bunion) because of the cross strain combined with narrow toed shoes. Ill fitting and badly shaped shoes especially with high heels and tightly laced and constricting uppers and narrow toes place the foot in a cramped position, prevent free muscular activity and produce weakness, atrophy and loss of tonicity.

Occasionally we find cases in children due to old attacks of infantile paralysis that have gone unrecognized because of the mildness of the attack and just this weakness of the adductors of the foot.

The earliest symptom of flat-foot is usually a sensation of weakness, a discomfort, a tire or strain about the inner side of the foot and ankle, occasionally after long standing a dull ache in the calf of the leg or pain at the knee, hip or in the lumbar region. After a time the patient may become aware that he is accommodating his habits to his feet; he rides where he once walked; he sits when he once stood. He no longer runs up and down stairs or jumps off the street car. His feet have lost their spring. There is apt to be pain and sensitiveness at the center or inside of the heel. His shoes are uncomfortable because the weak foot under use is altered in shape so that the shoe that was comfortable in the morning compresses the foot painfully at night, increasing the discomfort from bunions and corns. Coldness, numbness and altered circulation may be present. Actual pain as a rule is felt only when the foot is in use. As the condition progresses the range of motion becomes more and more restricted, muscular spasm holding the foot rigid, then slight sprains from jars are apt to take place and we have some synovitis and perhaps a real arthritis develop. These patients find the feet and especially the heels sensitive in the morning just on arising and are apt to limp about for a short time being unable to support their weight.

Pain sometimes present over the dorsum of the foot and the outside of the ankle where the external malleolus is pressing into the os calcis owing to the abduction of the foot. Cramps in the legs may be present at night and the pain in the feet may continue for hours after the patient retires. In the extreme flat-foot the gait is shambling; the feet are pushed by one another in an attitude of eversion, the knees slightly flexed and

the weight is borne on the posterior part of the foot. All lightness of step and spring have gone.

One begins the examination of suspected weak feet by noting the manner of walking and standing. The distribution of the weight and the way the foot is used will usually be shown on examination of the shoe. If it is bulged inward at the arch or worn away on the inner side of the sole, it shows foot weakness and the line of weight bearing is inside the normal plane and that the foot is working at a disadvantage.

The contour of the normal foot is such that the inner border is curved slightly outward. The feet placed close together, heels and toes in apposition, a slight interval remains between them. If the concavity is replaced by a convexity the foot is weak.

Pain in the various locations mentioned is a symptom of over-strain and bears no definite relation to the degree of deformity. The individual with the high arch usually having the most severe pain. Where the foot is absolutely flat, it is not apt to be painful although it does greatly alter the gait. The flat-foot in children is often due to defective assimilation and rachitic deformities.

The early acquired type is common at adolescence and is usually due to the muscular weakness and relaxation during the period of rapid growth. This condition needs careful attention at this period or the deformity may be permanent or at least very difficult to remedy after the bones have become fully developed in an abnormal position. A foot that has a low arch and does not flatten out under weight bearing and in which there is no restriction of motion is a useful foot. A foot that shows flattening of the arch under weight bearing with abduction of the fore foot and restriction of motion is a useless foot for military service and below par for ordinary use in civil life.

The principles of treatment which lead to a permanent cure of flat-foot are definite and rather simple but the application varies according to the severity and duration of the deformity. The weak foot because of inefficient ligaments and muscles to hold it in proper position, must be supported until regenerative changes have taken place.

First of all the selection of a proper shoe is necessary. This must be broad enough to contain sufficient space for the

independent movements of the toes; it must be sufficiently long; it should be rather snug at the heel and grip slightly at the counter and instep and have a strait inner border. The shape of the sole should correspond to the shape of the foot and the heel should be broad.

In mild cases of weak foot, it is sufficient to raise the inner border of the shoe to throw the weight a little to the outside. Those that toe out should be instructed to hold their feet parallel in walking and by crossing their feet when sitting. In standing they should avoid the long continuance of one position.

Exercises are of a great deal of value in strengthening the weak muscles of the feet, the adductors and plantar flexers. Tip toe exercises are particularly useful. The patient standing with heels six or eight inches apart, toes turned slightly in, the weight is raised on the toes, the legs being fully extended at the knees, then dropping down slowly the weight is thrown on the outside of the foot.

In the majority of cases however the foot will need some support in addition to the simple measures outlined. A foot brace to be efficient must hold the foot laterally as well as support the arch and must not prevent the normal motions of the foot and thus interfere with the increase of muscular power which is necessary for a cure. The supports ordinarily used do not meet these requirements. The pads and plates support the foot by direct pressure and restrict the motion of the foot. The brace to which I wish to call your attention, one that I have used for some time with the most satisfactory results, is one designed by Dr. Royal Whitman of New York. It furnishes the necessary support, it rolls the foot in and does not greatly interfere with the free muscular action. Its action is therefore curative while the majority are only palliative and after wearing them for an indefinite length of time the condition is not improved and the muscles are weaker and atrophied.

Any foot brace to fit well must be made over a plaster cast of the foot. Such a brace should not be applied to a rigid foot because it cannot adapt itself to the support. To prepare the rigid and deformed flat feet for the necessary support it is usually necessary to stretch and correct the deformity under an anesthetic. This can readily be done and

plaster-of-Paris applied with the foot in an over corrected position and held for about three weeks, then after a little manipulation the plates are applied and the patient is able to go about. In cases where the rigidity is not so marked, strapping the foot with adhesive plaster in position of adduction, gives a good result. Support is usually necessary from three months to a year or longer according to the condition present. In certain cases especially those of traumatic flat-foot, the heel cord is contracted and it is often necessary to lengthen the tendo-achilles.

In conclusion let me say that flat foot of most any type is amenable to treatment; that definite and positive results can be obtained if attention is paid to some of the details of treatment.

DISCUSSION.

DR. W. G. DIETZ, Hazleton: I should like to ask the author of the paper as to the relationship of the anterior arch. We always speak of the deformed arch of flat-foot. If the anterior arch should be thus flattened out, how can it be corrected? Can it be corrected with the apparatus Dr. Brooke has here?

DR. BROOKE: With reference to the question of Dr. Dietz, I would say that you will have noticed that one of the models sent around had a marked anterior bulging. It is a typical flattening of the metatarsal arch. This patient had pain in the foot for more than twenty years, the pain extending to the second or third toe, with a typical Morton's neuralgia. She had tried everything but surgical procedure. She continued zealously, for five months with treatment of the spine. It did not give relief, because the trouble was with the foot. As soon as she received support of the anterior arch, she got relief. The support I used was not in the form I showed you. That does not extend far enough to support the anterior arch. It is meant for the typical flat-foot. In some cases, I carry that support far enough forward to support the anterior arch. In other cases, I use a pad of very heavy felt under the anterior arch. I keep it there for a while, until I find out whether I have the right amount of support. Then I furnish a plate, or sometimes have what I call an anterior heel, which is a good, heavy conical piece of leather, inserted between the layers of the sole of the shoe, so as to give a rounded part and a smooth, even heel just over the metatarsal area.

DR. DIETZ: What is your experience with a large heel, the anterior part of which extends half or three-quarters of an inch beyond the usual heel?

DR. BROOKE: A broad heel is usually an advantage, the one called the Thomas heel. Many shoemakers use the Thomas heel, modified on the inner side. It does, in a measure, furnish support for the arch of the foot. In very mild cases of weak-foot, before you have the real flattening, it is of value. Just a word about rubber heels. Rubber heels, I think, are positively harmful. This is because rubber is resilient, soft and restful; and if there is a tendency to evert the foot and throw it on the inside, the rubber will let it down much more than leather would.

DR. T. M. JOHNSON, Pittston: Some of my patients say they are comfortable with French high heels.

DR. BROOKE: *We often find that people who have worn high heels for a number of years have great discomfort with low heels.* In such cases, it is wise to compromise. The tissues are usually shrunk, and the tendo Achilles shorter than is normal. When you let a person of this sort down on a low heel, the back of the leg is stretched.

INCIPIENT TUBERCULOSIS.

BY

THEODORE M. JOHNSON, M.D., WEST PITSTON, PA.

THIS paper is not intended as an exhaustive technical discourse of the means of the early detection and cure of tuberculosis, but to impress upon you the importance of early recognition of the disease; of even its probability in the simple tubercular stage before it becomes consumption. It is not addressed to those who specialize in such cases; who receive ten dollars a consultation and if they have hospital positions in the large hospitals have every laboratory facility with a trained corps of workers to do for them, although their discussion of it is craved. I don't decry these men but avail myself of their help. Rather do I address the general practitioner who very frequently does not have time enough to devote to individual cases; to go over it as the specialist does.

I was graduated before the day of laboratory training

and so can do but little of it myself. Nevertheless I avail myself of the services of those who are so skilled. However, I have heard of no laboratory tests which will give us any enlightenment on tuberculosis in the incipient stage; that stage when neither laboratory nor clinical tests can positively demonstrate tuberculosis except it be the tuberculin test. We are informed that an average of 85 per cent. of all people show at post mortem they have had tuberculosis. All right, then, 85 per cent. of your patients are suspects, and if you cannot make a sure diagnosis of anything and tuberculosis is at all a possibility then give tuberculosis the benefit of the doubt.

The subject is too broad to be covered in one short paper, especially if we consider all the different localities in which the tubercle bacilli may locate. But in the incipient stage, the first thing to consider is, is it tuberculosis, and next, where? Is it constitutional or as yet local as of the lungs or kidneys or glands, etc.? Most often it will be of a lung or the air passages leading to it because most exposed to infection and I refer more especially to that phase of the disease.

The study of incipient tuberculosis is confined largely to the young and very young. If the child has had measles, whooping cough, pneumonia, bronchitis, pleurisy, influenza or other infectious diseases; if it has been subject to lowered vitality from any cause; if it has been more or less subject to tubercular environment, then either the way has been opened for the infection or the subject has been overwhelmed by the too great exposure to the germs.

A beautiful little girl about two years old in a family where some of the ancestors had had consumption and whose mother might be classed as one liable to it constitutionally, went through whooping cough with complete recovery and died with tubercular meningitis within six months afterward. Her environment had always been the best.

You all know Dr. George Fred Laidlaw of New York. In an address delivered at a mass meeting of medical students at the International Tubercular Exhibition, American Museum of Natural History, New York, December 8, 1908, he said: "The year 1882 ushered in the bacteriological era with Robert Koch's masterly work in the discovery of the tubercular bacillus. For a time the profession was bacillus mad. Timid diagnosticians were afraid and are still afraid to make

a diagnosis of tuberculosis unless the bacillus was found in the sputum. Recently (1908) there has been a reversion to well tried physical signs and the physician who now waits for the appearance of the bacillus in the sputum before making a diagnosis of pulmonary tuberculosis is rightly regarded as having waited too long."

My own thought is that those of us who are not experts in diagnosis must suspect it and act on that suspicion unless we have reason to act otherwise. If the suspicion is incorrect your line of action in prescribing on that suspicion cannot carry you into serious error especially if your prescription is truly Homœopathic and your care of the case could hardly lead you to sending one with a serious heart disease into the high altitude, or to recommending undue exercises; that is if acting on suspicion you should be in error still you would not be likely to make a gross mistake to the disadvantage of the patient.

The Von Pirquet test should be resorted to more often in the young. Von Pirquet shows that from 10 to 14 years old the positive reaction is 58 per cent. and over 14 years 90 per cent. of positive reactions. This will vary in different localities and races. What disease can claim so high percentage of infections or even approach it?

I believe that symptom pain in the cords of the neck, a pain the patient complains of and which can be elicited by the examiner by gentle palpation, to be a valuable guide even to designating which side, right or left, is infected. Of course, loss of weight is generally recognized, then don't fail to have your patient weighed at intervals. You may find vague and even what may seem to be wandering pains in the chest, dull spots on percussion. I confess to very little skill in chest percussion unless the dullness is marked, however, the percussion note may be normal or only slightly shorter and a little higher pitched than the normal. The respiratory murmur is either enfeebled or roughened with prolongation of the respiratory sound, cog wheel or indefinite breathing. Rales may be discovered at one apex either in front or behind. Dry hacking cough especially in the morning may or may not be present. Such patients may have slightly abnormal rise and fall of daily temperature; also persistent sub-normal blood pressure (hypotension). Nervousness, there are so many nervous people. Some cultivate it because they

get pleasure out of making others unhappy; some have uterine trouble as a cause; some social and some business causes but suspect tubercular infection if your patient has a naturally good temperament but "flies to pieces" as we say over things calculated to try them; or show their nervousness by little tricks simulating chorea but plainly not that.

Is your patient lacking in normal endurance especially with shortness of breath from fast walking and that causes distress in the chest without any heart lesion present? Does inspection show sufficient expansion of chest—both right and left sides? Are the menses delayed or scanty? Is there capricious appetite? Sensitiveness to cold?

L. F. Baker says: "Examination by means of Roentgen Rays is less important for the diagnosis of the *existence* of pulmonary tuberculosis than for the recognition of the *extent* of the diseases," but he further says: "It is often very helpful for a *general preliminary orientation*."

Dr. Lawrence Flick expresses it very aptly when he says: "Tuberculosis must be looked for to be found," also, "in the incipient stage practically all cases can be cured; the majority without leaving home or giving up employment."

Treatment:—You are all quite familiar with the fresh air treatment but I wish to enter a protest on the cold air treatment. In a town not far from Scranton, a county seat, about four-fifths of the people have sleeping porches and very many of these people have most of the upstairs windows removed for the year around. I submit the question—are both essential in a loosely built up town? A lady returning from a week's visit in this town in the September cool weather just passed said she was very uncomfortably cold at night as all slept with light bed clothing. Is not that a waste of calories needed to keep up reserve? If all the cold air we can get is the desideratum why don't they all die in summer? *Pure* air is what is wanted. If you open windows to get plenty of it at night, then also continue the usual heat supply and your circulation in the windows will be better. These same people in aforesaid county seat live all day in warm rooms down stairs pretty well closed up, of course, in winter or they wouldn't be warm.

How beautifully belladonna will assist the anti-bodies to multiply in an ordinary scarlatina case! Then let us not forget that tuberculin in infinitesimal subcutaneous doses is

not the only remedy against tuberculosis for as germs and anti-bodies differ in the same disease but different individuals so that the autogeneous serum is frequently necessary, so also there are many Homœopathic remedies to arouse multiplication of differing but similar anti-bodies in the various manifestations of tuberculosis which, if properly used under favorable circumstances in the incipient tubercular will make the patient clinically well.

At the banquet at the American Institute meeting in Chicago, 1905, we were addressed by a gentleman from Iowa who in his younger days crossed the Atlantic in a sailing boat to be treated and clinically cured of consumption by Samuel Hahnemann. If Hahnemann could accomplish so much in the days when so little was understood of the care of a case then with the precious remedies he left us and our advantage in understanding the disease the incipient tubercular case *should* always be cured. Alas! However, the patient will not always do his part.

Three cases for illustration:—Miss D.; parents healthy; grandparents had no tuberculosis; one uncle died of it in youth before she was born and one uncle died of it at mature age. She had been a fairly healthy child from birth. At seventeen years of age—ten years ago—while ague was very prevalent she was taken sick with it and made recovery so as to go to school again, but always after was pale and anemic but very bright in mind and spirits. Four years ago she had a serious attack of pneumonia which was diagnosed as tubercular pneumonia. She got up and about but did not get well, although she is some better now. How much ague and how much tuberculosis in that first attack? The anemia? If I had suspected an underlying tubercular condition then I believe her tubercular pneumonia would never have occurred. The patient was never subjected to tubercular environment so far as social conditions were concerned, home life, etc.

Case B:—A single lady twenty-five years old, when treatment was commenced nine years ago she complained at times of pains diagnosed as mild lumbago; she also had some prescriptions of tonic nature as strychnine-phos. 3x. Later prescriptions for influenza, such as good old euphrasia and iodides, became more frequent: sometimes pulsatilla for delayed menses. She later complained of picking sensation low on left side of pharynx, very persistent, and began to show

physical signs of dullness in the lungs, hacking cough and loss of weight; about this time she had pains in the neck from the back up. The cords of the neck were painful to pressure. Someone in California wrote this symptom up in one of our journals or it was a report of his paper a few years ago, and I have verified it several times as an early diagnostic sign of tuberculosis. Three times the University of Pennsylvania laboratory in Philadelphia reported negative on tubercular sputum, a sojourn on the Pocono Mountains of three weeks added ten pounds to her weight and gave her such an uplift that I have been able by constant treatment to hold her from going into an active state of disease and gradually she is becoming established in health at middle life by the lopping off this and that symptom, yes by establishment of better vitality; possible she is becoming immune. This case had poor environment, she worked at light but confining work—sewing. Her mother had chronic fibroid tuberculosis and they slept together until I ordered them separated and the house thoroughly fumigated with formaldehyde. I consider this case saved from development of consumption after tubercular infection.

Case K:—A young man; tubercular history in family, of military variety. His married sister eight years older than himself, died of it at thirty years. His mother died of it five months after his birth and he did not live long in the home in which he was born. During childhood not much sickness; I don't know about his infancy but as he matured he began to have bronchial and laryngeal catarrhal affections, and pains in chest with some dulness. About the first work he did was grinding at the wheel in a glass factory. He began to go down. I ordered him out of that. He got work on a delivery wagon but still had recurring attacks of cough and pain in lung—no sputum but just hacking cough and illy defined dullness. He was a phosphorus looking lad except not tall.

(All these patients get phosphorus 3x on tablets more than anything else from me).

When old enough he got work with the D. L. & W. R. R. Company as freight trainman and it took him back and forth over the Pocono Mountain. The exposure and night work downed him a few times for a few days at a time but I said stick and he did. He now looks well and has been accepted

as a soldier. I don't believe tubercle bacilli could ever have been demonstrated in his case, but if it had not been recognized early there is no doubt he would be in his grave today.

Lastly:—The object of this paper, as stated at the start, is not an exhaustive or technical discussion of diagnosing or treating tuberculosis, but to emphasize just one point: That before tuberculosis can be *proved* is the time to treat and cure it.

IRITIS.

BY

WM. H. HILLEGAS, M.D., PHILADELPHIA.

(Read before the Fourteenth Annual Meeting of the Inter-State Federation of the Homœopathic Medical Societies of New York and Pennsylvania, November 9, 1917, at Scranton, Pa.)

IRITIS is the most frequent of those diseases of the eye which attack the deeper coats, and is not an uncommon disease by any means. In uncomplicated cases, if seen early and treated properly, the result in nearly all cases is a perfect cure. It, therefore, is necessary that definite diagnosis be made at once and proper remedial measures instituted. It is not my desire to make this paper didactic or severely special in outline, but rather to try to bring out a few important points in diagnosis, and to give a few suggestions for effective treatment. It is by no means necessary to consult a specialist for the treatment of iritis in all cases, nor is it always possible to do so, although when complications arise or sequelæ develop it is perhaps far wiser to do so.

Iritis, as you all know, is an inflammation of the iris, the colored part of the eye. From 30 to 60 per cent. of all cases are caused by syphilis, it being a secondary manifestation. It appears from the second to the ninth month after the initial lesion usually, but may be delayed up to the eighteenth month. It is advisable to take a Wassermann in all cases of iritis. The percentage of syphilitics who develop iritis varies from one-half to 5 per cent., according to different authorities.

The next most frequent cause of iritis is rheumatism or gout. Gonorrhœal infection through the blood is a frequent cause, and it is my belief that many cases of so-called rheumatic iritis are due to an old gonorrhœa followed by rheu-

matism; recent writers confirm this. There are other causes, such as tuberculosis, diabetes and scrofula, and many cases are classed as idiopathic, which term is perhaps merely one given to cover our ignorance in etiology. I have certainly traced some cases to prolonged exposure to cold air. Traumatic iritis usually in the form of iridocyclitis may follow injuries, and in this class are those cases which follow operations; and these traumatic cases are the only ones in which cold compresses should be used instead of hot compresses. I shall make no attempt to go into the divisions of iritis into primary and secondary, acute and chronic, nor to delve into its pathology, nor to linger long on its possible causes. However, in those cases not probably syphilitic or rheumatic, the general system must be thoroughly investigated for a possibility of focal infection, which usually arises from the tonsils or accessory sinuses or teeth, and this should especially be done in recurrent cases. Iritis does not occur during an attack of rheumatic fever but does attack a person subject to general rheumatism, and is not metastatic in these cases, but rather is due to an affection of the muscular fibres of the iris from the same cause that attacks the muscles of the body in general rheumatism.

Iritis is frequently mistaken for conjunctivitis and sometimes for acute inflammatory glaucoma, both mistakes are serious and the latter may be disastrous. The importance of the early and definite differentiation of these diseases lies especially in two things in the treatment—the choice of hot or cold (iced) compresses, and the use or avoidance of atropine.

About the first question after ascertaining the length of time since inflammation and pain developed in a sore eye, is in reference to the character of the discharge. This alone may settle the diagnosis, for in acute conjunctivitis catarrhal discharge varying from a slight mucous discharge to a pussy discharge is always present, there is always some thickness to its character, while in iritis the discharge is watery and oftentimes is lacking entirely.

The first thing to do in examining an inflamed eye is to search for and determine the absence or presence of a foreign body on or in the cornea which may cause severe inflammation, severe pain and tenderness to pressure. The difference in the pain in conjunctivitis, iritis and glaucoma is that in acute conjunctivitis the pain is of a sore type, an irritation,

a rasping or a scratching, while in iritis it is neuralgic, a severe aching pain, *always worse at night*, radiating to the temples and forehead, and there is marked tenderness of the eyeball on pressure. This tenderness is lacking or of a minor degree in conjunctivitis except when due to a foreign body. A decided increasing tenderness of the eyeball points to inflammation of the ciliary body, a serious complication. The pain and tenderness in acute glaucoma is similar to that of iritis and the differentiation must be made on other points, as the discharge, if present is also watery.

The appearance of the eye varies—in acute conjunctivitis there is more inflammation toward the fornices, near the junction with the conjunctiva of the lids; in iritis, while there is a general redness of the entire eyeball, it is more pronounced around the cornea, in fact if typical there is a pericorneal ring of inflammation, ciliary injection we call it, however, this is not always distinguishable. It is a haziness of the deeper layers, tinging on the violet rather than the deep red of acute conjunctivitis. It is more easily discovered by the use of a magnifying glass or loupe, and is also found in glaucoma.

The pupil is a definite point of diagnosis. In conjunctivitis it is not altered, in iritis it is either normal or contracted, usually the latter, if normal it is *always* sluggish in its reaction to light and this is pathognomonic. There may be an irregular pupil from adhesions (synechiae), and then the diagnosis is practically made for you. In glaucoma the pupil is dilated if changed at all. The cornea may be somewhat mottled in iritis due to serous deposits on Descemet's membrane (the posterior layer of the cornea), in conjunctivitis the cornea is not altered, in glaucoma it may look steamy and is rather anaesthetic, sometimes completely insensitive. In glaucoma the anterior chamber is shallow, and the tension is increased.

In iritis *alone* is the iris altered, its usual lustre is dimmed and the characteristic striations of its fibres become clouded, although in the earlier stages it is not always easy to see these changes—the iris may be thickened, and the pupillary margin have a fuzzy look, especially noticed if the pupil is not exactly circular, the circular fibres not acting as well in the thickened part of the iris. Syphilitic nodes when present are rather easily outlined, they appear usually at the pupillary margin, are about the size of a pin head or a trifle larger, and are in-

clined to be yellowish. They cannot be confounded with tubercular nodes, as these are less frequent, smaller in size, grayish and multiple.

The action of the pupil when atropine is used frequently confirms the diagnosis of iritis especially if the case is not acute, but is a recurrent case. The pupil dilates irregularly due to thickening of some parts of the iris, or to adhesions which bind some of the posterior fibres of the iris to the capsule of the crystalline lens.

Photophobia and lachrymation are very marked in conjunctivitis, in iritis they are slight or absent, but are more marked in iridokeratitis. This complication, by the way, I think usually begins as a keratitis, and goes deeper to the iris, not the reverse. In conjunctivitis the vision is not affected; in iritis there is dimness of varying degree, this being also the case in glaucoma.

A typical case of iritis then presents the following picture or symptoms: A low grade of inflammation of the eye with a sense of uneasy ache. The inflammation increases, pain gets severe and radiates to the temple and forehead, and is worse at night, the eyeball tender to touch, a ring of bluish-red inflammation around the cornea, photophobia and lachrymation slight, if present at all. The iris cloudy and decreased in its lustre, pupil contracted and sluggish and the vision dimmed. Diagnosis from conjunctivitis by the character of discharge, appearance of inflammation, appearance of pupil and its reaction; diagnosis from acute glaucoma by pupil and insensitive cornea, in addition to the tension, and shallow anterior chamber.

Prognosis should be guarded on account of the frequency of complications which may be serious and the sequelae which may be disastrous. However, as I stated before, in uncomplicated cases seen early and treated properly, a perfect result may be expected in the majority of cases. The course of a case of iritis is about four to eight weeks. Relapses are common in rheumatic iritis, and rare in syphilitic cases.

Now, what is the proper treatment? The important points in the treatment are—rest, relief of pain, reduction of the inflammation and treatment of the cause. Rest in bed for a few days at first, if possible, it is easier then also to give a free purge and a sweat. The eyes should not be used for close work during an attack. Rest of the accommodation with

atropine is important, and atropine is used for a double purpose, for putting the eyes at rest and for dilating the pupil as much as possible and so preventing adhesions to the lens which would result in synechiae. Light adhesions to the lens are often torn loose by the timely and thorough use of atropine. Atropine may be used in conjunctivitis frequently with great benefit by putting the accommodation at rest; it *must* be used in iritis to prevent adhesions, while in glaucoma it *dare never* be used. Atropine should be pushed for its effect, beginning with a solution of four grains to the ounce, putting two drops in the affected eye every three hours, if rapid dilatation is not produced, increase to eight grains to the ounce; after the pupil is well dilated reduce to a solution of two grains to the ounce t. i. d. In old cases where adhesions have already formed, I have sometimes used pure crystals of atropine placed in the eye. Atropine is very apt to cause a dryness in the throat by going down the tear duct through the nose into the throat. This can be prevented by pressing on the puncta of the tear duct as soon as the drops are put in the eye, and this is a wise measure in the use of all drops, it assures more thorough absorption. Dionin, from 2 to 5 per cent. solution t. i. d. is of much benefit for the relief of pain, and better still, if you can get it, is ethyl-morphin-hydroiodide, which is less irritating. Hot compresses applied properly and frequently are of inestimable benefit, and they also aid in the absorption of the atropine. It is not sufficient to merely bathe the eye with hot cloths, as patients will tell you they have been doing; a pad of ten or twelve thicknesses of absorbent gauze should be wrung out of quite hot water and laid over the closed lid, re-dipping every few minutes, and the application continued for fifteen or twenty minutes every two or three hours.

The patient should be in a dark room most of the time. The red iodide of mercury is the best internal remedy in all syphilitic cases, and rhus tox. is the sheet anchor of homœopathic remedies in iritis. In fact rhus tox. is perhaps the best homœopathic remedy for all deeper diseases of the coats of the eye. Ruta, sabadilla and kalmia should be thought of. Sodium salicylate, from twenty to sixty grains daily is of much value in all rheumatic cases. Aspirin may be needed to relieve the pain and at times morphia must be used at night, especially in the complications, such as iridocyclitis and irido-

keratitis. Total abstinence from alcohol, the reduction of proteids and a light diet with mineral water.

Personally I have been disappointed in the use of salvarsan in iritis, but most of my cases of syphilitic iritis, while secondary manifestations of lues were late not early in their onset. Gonorrhoeal vaccines have been valuable and effective in recent cases, not in late cases, where, while a history of previous gonorrhoeal infection can be elicited, the rheumatoid symptoms are marked. I do not advocate performing iridectomy for synaechiae—too much danger of cataract by bruising the lens.

So you see that in the treatment of iritis an absolutely positive diagnosis is essential as its treatment is so diametrically opposite to the treatment of diseases which might be mistaken for iritis, and that the use of iced or of hot compresses and the use or avoidance of atropine must be differentiated.

THE MEDICAL TREATMENT OF GYNECOLOGICAL PATIENTS.

BY

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(Read before the Tri-County Medical Society of Chester, Delaware and Montgomery Counties, October 9, 1917.)

THIS subject having been given your president, excuses me from any failure to make it interesting or profitable to the members of this society.

Those of us who are doing surgical work sometimes become a little rusty upon this subject, but in the homœopathic school there is no excuse for this except from the fact that most of our work is sent to us by the general medical man and we usually find that he has already exhausted the resources of the materia medica.

Under the head of medical treatment I shall consider local medication as well as internal.

My remarks will be general, with the exception of congestions and inflammations, as it would be taking too much time to consider the treatment of all special conditions.

Gynecological diseases may be classified, in a broad way, into inflammatory diseases, injuries caused by child birth and new growths, and it is in the first mentioned class that the medical treatment will likely be most useful.

Most diseases of the female organs of generation have many symptoms in common. We all know that women will complain of backache, bearing down sensations, pains in the pelvis more or less alike in character, constipation and perhaps irritability of the bladder, and in order to make an accurate prescription we must do here, just as we should in any disease, prescribe for the patient, so that while there is a certain class of remedies that will be found to be most useful in treating diseases of women, such as bryonia, belladonna, sulphur, rhus toxicodendron, sepia, pulsatilla, nux vomica, hydrastis, cimicifuga and caulophyllum, it is the symptoms of the patient in their totality that determine the prescription, in fact it will likely be symptoms entirely foreign to the pelvis that will help us the most.

We strike at inflammatory diseases, of course, through the circulation, relieving congestion by both local and internal medicines.

During my twenty years' service in the dispensary of the Hahnemann Hospital I often talked over this matter of local treatment with others in the department, and I think we all agreed that we could obtain the best results, in most cases, by combining internal and local treatment.

There are some patients by whom local treatment is not well tolerated and I believe that these women make more rapid progress by omitting the local measures, for I find if it be persisted in, it usually retards recovery. It is a good rule to abandon any form of treatment that causes the patient much discomfort, be it pessaries, tampons or what not. We all know what a tremendous part nervousness plays in diseases of women and if anything is done to increase this, we will surely retard recovery. I think this point is sometimes overlooked by all of us.

We often have many distressing symptoms from a purely local congestion and in these cases we get brilliant results from local and internal medicine. Unfortunately these congestions are usually dependent upon some pathology antedating the congestion, such as lacerations and displacements. In such cases permanent cure can only be had by remedying the cause, but this takes us outside of our subject of medicines.

Probably the remedy that will be most frequently indicated is belladonna with sepia following a long way behind. Both act promptly when indicated. Dr. Smedley used to say that he

could tell which of these remedies was indicated by the local examination without asking the patient a question, and I believe this is usually true. The character of congestion produced by the two remedies is entirely dissimilar while the symptoms are *very* much alike. Belladonna causes an active arterial congestion with redness while sepia causes a venous congestion with more or less blueness of the tissues. Relaxation is the key note for sepia while the reverse is true of belladonna. This difference holds good not only in the pelvis, but throughout the body; we can tell at a glance to which type the patient belongs.

In conjunction with the internal treatment of these congestions local treatment will hasten the ultimate recovery. A valuable adjunct, if given properly, is the hot vaginal douche. The secret of success here lies in the use of the water as hot as the patient can bear it and in prolonging the douche far beyond the time that women usually give to this operation. The best results can be obtained by having the patient assume the recumbent posture while an assistant fills the douche bag repeatedly, five or ten minutes being consumed. A great quantity need not be used as the water may be quite hot in the bag and allowed to run slowly. It is heat, long continued, that we desire, not a great quantity of water. The nearer we come to this technique the better will be our results. The douche should be used at a time when the patient can lie down for an hour or two following, therefore upon retiring for the night is the preferable time to employ it.

Another method of reducing congestion of the pelvis is the use of tampons saturated with glycerine with or without medication incorporated with it. These should be worn from twenty-four to thirty-six hours and followed by a douche. They should not be used if they cause pain. The doctor who persists in a method of treatment which causes his patient pain will usually be unsuccessful in his use of local measures. I refer especially to pain following a treatment.

In the management of inflammatory conditions where there are masses of inflamed tissue in the pelvis we use different internal remedies as well as local measures. Belladonna is often of great service as well as sulphur, bryonia, rhus tox., iodine and a host of other remedies which, while not always having a direct effect upon the inflammatory tissue, control the concomitant symptoms, to the great relief

of the patient. Here the local treatment is directed toward absorption and we use Churchill's tincture of iodine painted on the vaginal vault, care being taken to remove any excess of the tincture as the lower vagina is sensitive and iodine will burn the patient for hours if allowed to come in contact with it. If we are so unfortunate as to have this accident occur, the iodine may be removed with a pledget of cotton saturated with glycerine. This application may be followed by a plain glycerine tampon which also hastens absorption. A glycerine tampon into which ichthyol is incorporated is also useful as an absorbent as it contains much sulphur. Its odor is rather offensive and objected to by some. A glycerine tampon when used without other medication will keep sweet longer by using a boroglyceride. It is well, when possible, to use the same remedy internally as locally, for instance, sulphur internally when ichthyol is used locally. This is ideal, but not always practical.

Without going into further detail of treatment I would say that I have had the best success in differentiating remedies by paying particular attention to the mental symptoms and the modalities, rather than the local symptoms.

We can hardly dismiss the discussion of remedial agents as applied to diseases of women without reference to pulsatilla. This is vaunted perhaps more than any other remedy and yet in my experience it is not indicated nearly as often as many others. When it is indicated, however, it is one of the very best and most reliable of medicines, here again the mental symptoms largely dictating its choice.

The results of medical treatment alone for the symptoms caused by lacerations and displacements are naturally not very brilliant as the cause is not removed; however, it is a fact that at times we get great relief with medicines.

The results of the medical treatment of new growths are about the same as in the treatment of lacerations and displacements; they are sometimes of use and sometimes not.

We can, of course, relieve congestions and nerve pains by the use of internal medicines and thus make the patient comfortable for the time being even in incurable diseases. We must use common sense in such prescribing and not expect too much.

We will sometimes be disappointed in the action of homeopathic remedies especially in nervous conditions. We may

find that a well indicated remedy acts only temporarily, and in such cases we will often find help in the employment of some of the gland extracts. I think it is worth while to seriously consider this phase of treatment. For instance, at times you will find that patients passing through the menopause will respond nicely to the indicated remedy for a week or a month and then relapse to their former condition. The menopause may be either natural or artificial. In such try the extract of the corpus luteum and you may find all that is needed to restore the patient to perfect health. I am confident I have saved a number of patients from the insane hospital by the use of this remedy.

As a specialist, whose work is mostly surgical, I would make the plea to the family physician to carefully care for the patients whom the surgeon returns to him after all possible has been done in the way of surgery. So frequently these patients are cast adrift when they are greatly in need of good homœopathic prescribing to complete the cure. Probably more than half of our surgical patients will not be as well as they should without this help. Surgery removes the gross pathology, but from the nature of these cases, very much may be accomplished by the use of internal medicines.

In conclusion I would say: Do not neglect the homœopathic remedy in treating your gynecological patients for if this is combined with the correct local and hygienic treatment, I believe, as I said before, that the best result possible will be attained. I also believe that the man who is a good prescriber is entirely competent to prescribe internal medicine for his gynecological patients, for while the specialist learns that certain remedies are more satisfactory and act better in his particular line of work than others (which may seem as well indicated) still as I have repeatedly said, it is usually the mental symptoms and the modalities, in other words the patient, which indicates the true remedy needed for relief or cure.

A FEW FAVORITE REMEDIES IN COUGHS.

BY

R. O. DIEHL, M.D., MANHEIM, PA.

(Read before the Central Pennsylvania Homœopathic Medical Society at Lancaster, Pa., October 11, 1917.)

REMEDIES for coughs are so numerous that the physician is often at a loss to know where to look for the similimum. Indeed, in our haste to relieve a cough, or, as the patient puts it, "to remove a cough," we too often lose sight of the homœopathic similimum and choose what our drug firm calls a "cough remedy," viz., a combination tablet, a sort of gunshot treatment. I suppose all of us have been erring by the too frequent use of this treatment instead of giving our patient the true homœopathic cure for his cough.

First among our great cough remedies is aconite. Its usefulness is often past before the doctor is called. It is one of those remedies to be used early—to cure a cough before it is fully established. In this respect it might be classed with the abortive remedies. Think of it in the beginning of a cold, especially if there is a dry skin with fever and hoarseness.

We should, however, look for our aconite patient before choosing the remedy. He is a plethoric person; gets sick suddenly upon exposure to dry winds; he quickly develops a cough with a marked degree of hoarseness. Here is our remedy for symptomatic croup; especially if the child wakes up during early first sleep with a hoarse, dry, tight bark; there is much evidence of suffocation. Think also of spongia, which has less fever, appears in a more anemic child, shows the attack about 11 or 12 at night; but with the attack there is less anxiety, less suffering. Hepar also is indicated in croup, but in this remedy the attack comes from 12 to 24 hours after the exposure, and is, therefore, of still more gradual onset and appears with less violence.

In pneumonia, too, aconite comes in early while the stage of active congestion is in progress. There is anxiety, high fever, a dry cough, and possibly an expectoration of blood or bloody mucus.

Remember your picture of the aconite patient and you have the key to many a cough.

Byronia—the slow, easy-going but persistent remedy. We say, “Always worse on motion.” The symptoms develop slowly, though they may be of acute onset. It has a continued type of cough. We may have been treating that croupy cold with aconite, or another cold with gelsemium, and the pneumonia with ferrum phos., but after a few days we settle down to byronia as our remedy. The next day we find that cough less sharp, and the temperament, temperature and pulse of our patient more in harmony. We now have begun to treat our patient, and he is better.

We have that peculiar irritability in bryonia—worse on motion; we also have that step by step development, viz., the nose, then the throat, then the bronchi, then the lungs affected; hence naturally a wide field of usefulness for our remedy in coughs.

The cough of bryonia is painful, shows a tendency to inflammation of the right lung; patient holds his chest on coughing; it is so painful and the cough so violent. With the cough there is difficult expectoration.

We may mention phosphorus now mainly to differentiate from bryonia. Here we have the weak, slender, sickly, nervous constitution with a waxy complexion; a constitution that offers a fertile field for the tubercular germ. We find the indications for the remedy in chlorotic girls, and in people with a haemorrhagic diathesis. Patient is very sensitive to external impressions, viz., odors and noises.

Phosphorus coughs are always worse from a change in the weather, in the evening, and by lying on the left or painful side. On coughing there is apt to be expelled a bloody, or rust-colored, or purulent sputum. Violent cough from irritation in larynx and trachea—worse from talking, from inhaling cold air, or from odors. Think of phosphorus in any of the respiratory diseases when you have the phosphorus constitution and the peculiar cough symptoms of the remedy.

Ferrum phos., may be compared in respiratory diseases. Its most frequent use is early in the disease, when there is congestion, and rusty sputum, and possibly epistaxis. The febrile disturbance is, however, less violent than in aconite or bryonia.

Antimonium tartaricum is another favorite in coughs. This remedy is indicated in many of our seemingly hopeless cases. Our patient is catarrhal, and has a broken down con-

stitution, and is either a feeble child or an aged person. The patient's face is pale and sickly; the eyes are sunken and surrounded by dark rings; the nostrils are dilated and flapping; the expression is one of suffering. We have said that our patient is catarrhal, especially throughout the respiratory tract. Upon examination we hear rattling and bubbling in the chest. We see now that our remedy is seldom indicated early in the disease, nor while the constitution is strong. Such medicines as bry. or ipec. are used early in the case.

The cough is a rattling cough. The chest is full of mucus, but the patient is unable to bring up the mucus on coughing. So we find our young or aged patient working for breath with practically no relief from his rattling cough. In capillary bronchitis and catarrhal pneumonia we have our typical cough and chest symptoms.

Remember the catarrhal state, extremes of life, feeble constitution, moderate fever, cyanotic state. We find that many of these patients can be tided over a winter cold by the judicious use of this remedy. If your patient does not respond to the remedy, interpolate a dose or two of sulphur.

Potassium bichromate—the catarrh remedy for mucous membranes. With all kali. symptoms we have the thick, ropy, tenacious mucus. In the nose or throat discharges of tough, green masses of mucus or bloody plugs. Sharp shooting pains in head, throat or chest are worse from coughing. On the chest there is a burning soreness extending from the spine to the bifurcation of the trachea. The cough aggravates the pain. He coughs up this ropy, viscid mucus. This is a remedy that is usually thought of in the late stages of catarrhal affections, pneumonia and during whooping-cough. As to potency, I invariably use the sixth.

Belladonna produces the active congestions with extreme violence suitable to plethoric, vigorous, intellectual individuals, and is more often thought of in the growing child than all other remedies in our materia medica. The child's cold immediately develops a high fever; a red, hot, dry skin; nervous twitches; and occasionally convulsions. There is a dryness in the throat and trachea, which gives a tickling, short, dry cough—worse at night, worse lying down, worse from a draught. Bear in mind that when there is a belladonna cough we find fever or at least a sense of heat (a congestion) at the point where the cough is located. Belladonna may

be indicated early or late in the cough, or throughout the whole affection causing the cough. Bear in mind the picture of your patient.

Here compare the red iodide of mercury, which has a very tormenting pharyngeal cough. Upon examination we find the pharynx, uvula and soft palate a deep red color and quite painful. The patient says, "Doctor, I must cough all the time; it seems to stick right in my throat and it is so painful." Give the red iodide 3x in this case.

I would not consider this paper complete without referring to a remedy that demands a place in the practicing physician's armamentarium. Drug stores and agent's sample cases are always full of cough cures, expectorants and what not; but given a case where you need a splint for your coughing patient, viz., to ease him during the night or to quiet his cough during his stage of a dry pleurisy, use heroin 1/20 to 1/12 gr. By using the straight heroin you know exactly what to expect from your drug, and you will get results which are gratifying to patient and physician. One or two tablets are all your pleurisy cases will require; and that case of pleuro-pneumonia will hardly demand the use of this medicine for more than one or two evenings. Depend on your homœopathic medicine in your practice. Heroin is only the physician's splint in coughs.

A SUMMARY OF MY TWENTY-FIVE YEARS' EXPERIENCE IN THE PRACTICE OF MEDICINE.

BY

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(Read before the Luzerne County Homœopathic Medical Society and by resolution of Society re-read before the Inter-State Medical Meeting.)

THERE is an old and trite saying that a wise man profits by the experience of others, but a foolish man will insist on bumping into such experiences for himself. Knowing that all the members of our society belong to the wise ones, I felt it proper that I might present to you a few of my experiences relating to the practice of medicine, hoping that they might incite you to likewise divulge some of your own.

Allow me to introduce the paper of this evening by another well known saying, "In things certain unity; in things doubtful liberty; in all things charity." There are a few things certain in medicine, there are many things doubtful, and a still greater field of medicine in which all things obtain and call for charity. Amongst the things certain in medicine is the truth of homœopathy, it is a proved fact that certain drugs will cause certain symptoms and that if these same drugs are given to a sick person complaining of symptoms similar to those this drug produced in well people, it will cause the disappearance of those symptoms that the patient complains of. This it has done once, yea, is doing many times every day in the hands of many physicians who so prescribe drugs; besides the proof of such action is open to any honest investigator. I repeat, any man or set of men can turn pioneer provers of, say, aconite, belladonna, bryonia, etc., etc., administer same in physiological doses to healthy human beings and correlate from these provers objective and subjective symptoms and do this all within a reasonable time of a month or two, and then in the next period of a month or more prescribe these same remedies in doses short, or doses small enough not to produce physiological symptoms to sick people having symptoms similar to the ones these drugs caused and then notice the result. If said symptoms in a large number of patients promptly disappeared upon the administration of these remedies, it would seem to an honest mind that such a clinical observation would be proof sufficient that the disappearance of such symptoms had a direct relation to the administration of the remedy given. Yes, the law of similars in drug action, namely, that "likes are cured by likes," is amongst the few things certain in the great field of medicine and whether I or my fellow doctors of this or the dominant school believe or practice according to this law of cure, or disbelieve and reject it makes no difference as far as the truth and certainty of this law of drug action is concerned, but it does make a deal of difference to two-and-a-half billion people to-day in their health, life and well-being if it is given its proper related place in the cure of disease of mankind. A boon to man was indeed given when Hahnemann demonstrated and gave to the world homœopathy.

Now for the second proposition in the introduction of my paper; namely, in all things doubtful, liberty. Here is where

the broth gets spilled by many belonging to all schools of medical practice, as well as politics, religion and the other sciences. The mountain of truth is great and eternal, but the approaches to the summit are many and the various paths up the slope are different and afford many views. Once we get to the summit we can agree as to what we see perhaps, still depending upon our correctness of vision; but in getting there let us assume a conciliatory attitude in respect to one another as seekers after the great truth; not as though any of us had fully attained, but rather are striving and hope to arrive; not as though one path embodied all the other paths and views, but rather, that every one's path and view will, when put together and properly interpreted and related, form a beautiful piece of mosaic made up of different medical views but all blending in a larger medical horizon wherein the doctor labors to help or relieve the sick.

As I analyze my medical beliefs to-night, based upon nearly twenty-five years of experience, I believe that the proper relation of homœopathy *per se* to human suffering is that of a specialty in the prescribing of internal remedies, somewhat similar but wider in scope to that of the specialty of surgery. I believe that to try to make homœopathy do what surgery can do so much better, or to expect homœopathy to do what mechanical means should do, or to insist on the curative action of a homœopathic remedy when later the palliative action of a drug is called for, because of its better immediate effects is not for the best interest of the patient and does violence to the spirit of the teaching of Hahnemann when he laid down as the first duty of the physician the cure or relief of the sick in the safest, speediest and most permanent manner.

The third plea, namely, in all things have charity as charity fulfilled, gives to all fields of scientific endeavor its greatest impetus to reach by research, experiment and investigations, conclusions which become facts and permanently help mankind. I will ask my fellow doctors to read between the lines for themselves; to explain would make this paper too long. Let us then, as fellow members of our Medical Society, bid one another God speed as we severally go forth from day unto day into the danger zone of the suffering, sick and dying, trying our best to bring relief or cure to our sick-stricken patients, for, after all, this is the goal we aim for; the how,

the when and the why must all bend themselves to the goal, namely, the relief or cure of the sick. Viewing the doctor's relation to his patient from this angle, I believe you will patiently bear with me and hear what I have found in my medical travels so far, being able, of course, to give you a very small part or summary of experiences that seem to me at this time most prominent, assuring you once again, if this need be, that I accord to all of you gladly the same privilege of individual thought and action that prefaced this paper.

First.—Amongst other experiences of mine the one that dominates is that I have found it to be a certainty that “likes are cured by likes;” that there is a homœopathic law of cure and the world at large is a loser because that truth has not been recognized by doctors of all schools, largely because of prejudice.

Second.—An experience which is separated from the first but is linked with it is that the study and knowledge of symptomatology of a remedy must be hitched up with equal pains-taking and intelligent study of the symptomatology of the sick patient. To be 100 per cent. efficient in *materia medica* and 50 per cent. efficient in diagnosing the real value of clinical symptoms is like driving a team with one horse strong and steady and the other weak and unsteady. This is a truth born of experience that I cannot overestimate and yet I am sorry to say that many a doctor has to learn it for himself. Hahnemann says, “A case well taken is one-half cured.” I believe it.

The third experience long neglected by myself and no doubt to the disadvantage of many of my patients consists in the value and necessity of keeping a written record of chronic cases at least. To ask your fertile brain, the biggest asset you have, to keep such records, even were it possible, and keep them stored away in the mysterious chambers of the brain, is an imposition upon your best self.

Fourth.—That there is no business or profession in existence to-day that has as loose and haphazard a way of getting paid for what they do as the doctors. In this the doctor stands alone. I was taught that the average person would get somewhat more or less offended if he received a bill for medical services and because of this loose custom, though I found it was somewhat true; nevertheless I am glad to say that I have abandoned this ruinous practice and have trained

my patients to receive a statement at least once every three months and many of them oftener.

Fifth.—That the ethical and altruistic in the practice of medicine is still present and always will be, but that the commercial side in these days of high cost of living is looming up larger and larger; I still believe that the relations between patient and the doctor should be closer than that of a business contract. The element of sympathy, conscientious concern for the patient's well-being and the effect it may have upon his family, etc., must be present with the doctor or else he suffers loss and degenerates into that of a real mercenary.

Sixth.—That the broad, general practice of medicine embraces any agent or means by which sick people can be made well or suffering ones relieved. If homœopathy in your experience does this, splendid; if it does not, then use the next best means at your command. And let us remember that on the day of our graduation we (were graduated and) received a diploma from Hahnemann College who through the power given to her by the Commonwealth of Pennsylvania, graduated us as doctors of medicine first, and, in addition to that, doctors of homœopathic medicine.

Seventh.—My experience teaches me that the better a prescriber I am, the greater the sum total of relief my patients will get, that the better a diagnostician I am, the greater the sum total of good I will do my patients, and by happily combining the two and giving them both the proper place, I find that I can inspire confidence and trust on the part of my patients that before I was not able to do.

Eighth.—I have unlearned that which I had learned; that all real, permanent, curative measures in disease were homœopathic and that all other measures not so related were to be discredited as having no real abiding value in the treatment of disease. I remember having said to more than one patient while defending homœopathy that all the treatment as found in old school text books that was ten years or more old was obsolete. For this we were not altogether to blame, for have not the old school men ridiculed us as dispensers of sugar pills, moonshine and sweetened water? I am glad that those days are passing. The brightest lights of the dominant school have in their writings and in their clinics admitted the truth of homœopathy, thus they attribute a homœopathic action to the various vaccines, anti-toxins, serums, phylacogens and

autogenous vaccines, as well as to the so-called organic products. My belief is that if some homœopath in his research had given these remedies to the world, the homœopathic fraternity would have adopted them long ago even if their method of administration was by way of the needle instead of potentized triturate; on the other hand, the old school has generally accepted the value of these above mentioned agents of cure and the laity think they are ultra allopathic, whereas they are near, if not real, homœopathic.

Ninth.—Take no pleasure in the story of the patient who denounces the other doctor, for he has not paid him a shekel and will in time maltreat you as he is now maltreating this fellow doctor. If it is in him, he is capable and seems perfectly willing to do it to one and will again do it to another. This patient is selfish, ungrateful and would sue you for ten thousand dollars damages if he had half a chance. Anyhow, my experience leads me to appreciate the good will of all my fellow practitioners and I would not knowingly or willfully jeopardize this good feeling between doctors for any price or patient.

Tenth.—Do not let the community amongst whom you practice call you "Doc." If they do, discourage it, resent it, fight them, bite them, kick them, throw ink at them, call for police protection to vindicate your good name as Doctor, and if your efforts do not avail, pack your duds and move to another city. The doctor, to be successful, must maintain his self-respect, a professional bearing and knowledge that lifts him above the commonality without being snobbish, of course, but which incites confidence in his patients so that as he bends over the sick one, the feeling creeps over such a one that the doctor knows, that he understands, that he is interested, that he will help as far as possible, and that the case is safe while entrusted in his hands. All these elements that bespeak confidence, poor "Doc" is robbed of in the town where he is so known.

Eleventh.—Status of medical education at three periods during the last twenty-five years: 1893 requirements:—common school education; work college term three years; expense for medical education \$1,500 to \$2,000; average age of graduation around twenty-three years. 1900 requirements—common school; college term four years; State Board of Medical Licensure cost \$2,000 to \$2,500; average age at grad-

uation twenty-four. 1915 requirements—two years college preparation; four years medical college; one year hospital service; cost of education \$3,500 or more; average age on entering practice twenty-six. 1918 requirements—Four years general college course; four years medical college; one year hospital; cost of medical education a minimum of \$4,500 to \$5,000; average age on entering practice twenty-eight years. Will the graduate of to-day under this new regime be a better doctor, take it man for man, than the graduate of twenty-five years ago? How can the father in ordinary circumstances hope to give his boy a medical education? (Since writing this paper the term for a medical education has been shortened). Again, how can the medical student of to-day hope to have a practice sufficient to warrant him to get married until after thirty? At best his father will have become sixty or more years old before he can hope to see his first born son take in his first dollar in the practice of medicine. And if the coming doctor who has to pay back to father the cost of his medical education is out of debt at 40 years of age, he is fortunate, and Prof. Osler says: man has reached his zenith at about 45 years of age.

Twelfth.—In spite of all these hardships that a young medical doctor is up against, look at the competition that he faces in the immediate future if I read the signs of the times correctly. First, he will have to compete with the so-called non-medical cults in practice, such as christian science, osteopathy, chiropractics, hydrotherapeutist, electrotherapeutist, medical advertising agencies, including counter dispensing from drug stores and patent medicine. Second, he will have to compete with compensation service which already shuts him out from all accident work. He will have to face, also, health insurance wherein any employee receiving less than a hundred dollars per month will be insured by his employer for the loss of health, and, of course, said employer, whether railroad or industrial plant, will contract with their health insurance doctor. He also has to compete with contract services for lodges and societies. Thirdly, big insurance companies such as the Prudential and Metropolitan are already furnishing all their policy holders when sick with the services of a trained nurse, free of charge, who gives them good advice and often prescribes local and even internal measures as well as suggest a good doctor. District nurses occupy a

large field. Examination of all school children by a few doctors, appointees on the part of the school board also give free advice and not infrequently suggest a doctor. The abuse of free service of hospitals and dispensaries of all kinds and free hospitals for contagious diseases are all well known. Advertising quacks. And lastly, comes a subtle but, potentially, a powerful influence into our field which still further crops the wings of the young doctor. It is the new avocation advanced by the State Medical Board of Licensure which they say can be filled by any young man or young lady of average intelligence, and that after several months' training it is said that said party can be considered quite efficient. It is the technician I speak of. This person, without any previous medical training in fundamentals, may be taken from behind the desk or counter and made to become efficient to make a qualitative or quantitative test of urine, also prepare slides of urine and of smears and discharges, such as sputum, etc., strain them, mount them, scope them and even report to the doctor what the diagnosis is. He or she may also do the work of an X-rayist. This same Board also says that a trained nurse may by training a short while become your official anaesthetist, and even be first assistant to the doctor or surgeon under his supervision as he may elect. And we admit that they can do these things through being shown how and by practice, just as a midwife can deliver a woman in confinement.

But if these things are allowed to continue and grow, what is to prevent every town from having a number of these so-called technicians opening offices and offering their services to the public as being efficient to examine urine, blood, sputum, smears, specimens, and make autogenous serums, give anaesthetics, etc.? But, alas, the poor young doctor! where does he come in after having spent from \$5,000 to \$10,000 and eight or ten of his best years? Isn't he entitled to these fees that will be a great help to him while in his struggling years, and if the technic of the scientific and laboratory end of medicine is so easily acquired in such a short time by untrained persons, why, then, this high standard of pre-medical education, requiring so many years on the part of the coming young doctor at such a great cost?

Fellow doctors, what is the conclusion of this whole matter. Is it not that we have been asleep at the switch as a body of medical men, irrespective of schools, making eyes at

one another while a number of doctors, perhaps unintentionally, have brought a condition in the name of medical education, which in its outworkings, unless stemmed by that large reserve force of conservative doctors, will make the study of medicine available only for the rich man's son. Let us fight to maintain a free profession, for if we don't watch our status as medical men, the doctor will become a hired man working for so much per head, and whether it is under the employment of the State as health or insurance doctor, or under an employer of labor, or lodge, makes very little difference. If this once generally prevails, then no more can the doctor lock his office door and go on a vacation or fishing trip when the wind is in the south or when it suits him; but he must first consult somebody else as to whether he dare, for protests would surely be made to the head office if he disobeyed, and if the doctor cannot, or will not, meet the wishes of said employment agencies, then somebody *else* will be given the *job*—I emphasize the word *job*, for that is what we are tending towards.

THE NATURE AND DIAGNOSIS OF CHRONIC HEART FAILURE.

BY

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I HAVE no excuse to offer you for asking you to direct your attention to-day to a consideration of the subject of chronic heart failure. First, because the death rate from diseases of the heart is exceedingly high among physicians, and, second, because it is a generally recognized fact that diseases of the cardio-vascular-renal system are rapidly increasing among people in all walks of life. The prevalence of chronic heart and renal disease among physicians is a lamentable commentary upon modern medicine. Scarcely a week passes that I am not called to see some physician broken down at the age of fifty or fifty-five years of age with cardio-vascular

degeneration, left practically helpless at a time of life when a man should be in the full possession of all of his physical powers and enriched by years of practical experience.

That my personal statistics is by no means unique is forcibly shown by statistics collected by Casper, who found that the number of individuals out of a hundred reaching seventy years of age in the various occupations are as follows: clergymen, 42; farmers, 40; merchants, 35; physicians, 24.

The general increase in diseases of the heart, blood vessels and kidneys has been indisputably shown in the reports of the life insurance companies. Dwight states that 50 per cent. of rejected risks during the year of 1912 were for circulatory disturbances. Mr. J. H. Gore, President of the Actuarial Society of America, states that there has been an increase of 50 per cent. in the death rate from diseases of the heart and kidneys at the higher age periods during the last few years. It is a curious fact that while modern hygienic measures have cut down decidedly the typhoid mortality rate and that of tuberculosis, etc., the mortality rate from diseases of the heart, arteries and kidneys has increased steadily. Fisk states that the increase since 1880 has amounted to 100 per cent. and examination of the physical condition of one thousand employees of banks, trust companies and industrial houses made under the supervision of the American Life Extension Institute reveals the following facts: Average age, 27; percentage showing organic heart disease, 16 $\frac{2}{10}$ per cent.; thickened arteries 42 $\frac{4}{10}$; blood pressure, high or low, 26 per cent. Urinary changes, albumin, sugar and casts, 39 $\frac{8}{10}$ per cent. I have included in the above only those who were found to be moderately or seriously affected. Considerably more were found to suffer with circulatory urinary difficulties of a minor degree. I could cite innumerable statistics to prove the seriousness of the problem which we, as medical men are compelled to confront, but time does not permit; sufficient has been said to indicate that American business methods, while a great success from a financial and productive standpoint are proving a lamentable failure from a health standpoint.

ANATOMY AND PHYSIOLOGY.

As a correct understanding of the nature and treatment of heart failure is impossible without a knowledge of certain

fundamental facts, I shall briefly review some important data in connection with the anatomy and physiology of the heart.

In the first place, it will enable us to get a clear understanding of the heart if we regard it as a muscle, the function of which is specialized to a very high degree, but in all essential points it is a muscular organ. The arrangement of the heart muscle is extremely complicated but, in the main, the heart is made up of layer upon layer of muscle fibers, following a more or less spiral course. The connective tissue of the heart is extremely scanty and is chiefly collected in thin layers beneath the endocardium and the pericardium.

The heart receives its blood supply from the coronary arteries which have their origin in the aorta just behind the aortic valves. The branches of the coronary arteries are endarteries in Cohnheim's sense and their complete blocking off entails the death of the area which they supply. A certain amount of anastomosis exists, however, between the main branches, showing that a gradual closing of a branch of the coronary artery is partially compensated for by dilatation in some of the other vessels. Any obstruction involving the coronary arteries naturally interferes seriously with the nutrition of the heart muscle and many of the gravest forms of heart failure are dependent upon diseases of the coronary arteries.

A study of the physiology of the heart muscle has revealed many points of diagnostic and therapeutic value. The myogenic theory of the heart's action has been practically universally accepted. It can be readily proven that a heart entirely cut off from the central nervous system, in fact, an isolated heart placed in normal salt solution, will continue to undergo contractions in a rhythmical manner for many hours. The action of the nervous system on the heart has been proven to be entirely of a regulative character. Each fibre of the heart muscle possesses the following functions:

- I. Stimulus production.
- II. Excitability.
- III. Contractility.
- IV. Conductivity.
- V. Tonicity.

By stimulus production we understand the capacity of

the heart muscle to produce within its fibres a substance which is capable of bringing about stimulation of the fibre.

By excitability we understand the power of the heart to contract when stimulated.

By contractility we mean the power of the heart muscle to shorten itself when excited. With voluntary muscle the degree of contraction in response to stimulation varies in direct accordance with the intensity of the stimulus, but the cardiac muscle reacts to all stimuli whether great or small in exactly the same way. During systole the power of contraction is lost and immediately afterward is at a minimum.

During periods of rest the functions of stimulus production and of excitability rapidly recover themselves and, the longer the pause the greater the amount of excitability and consequently a slight stimulus is able to bring about a contraction.

The function of conductivity, that is the power of transmitting the impulse to contract from one portion of the heart muscle to another is common to all heart muscle, but is especially developed in the auriculo-ventricular bundle to which we will refer later.

The function of tonicity, that is the power of the heart muscle to maintain a certain degree of contraction even during periods of diastole, is essential in maintaining the normal size of the heart. When failure of tonicity occurs, dilatation of the heart ensues.

A normal cardiac contraction begins about the sino-auricular node, situated in the right auricle near the orifices of the vena cava. From this point, the impulse travels to the left auricle and is then transmitted down the auricle-ventricular bundle to the ventricles. Normal cardiac action, consequently depends upon the integrity and proper correlation of the various functions of the heart muscle and, consequently, when failure of the heart occurs, we may find one or all of these functions impaired.

WHAT IS HEART FAILURE?

In considering the subject of heart failure, it is important for us to disabuse our minds of the idea that the term is synonymous with valvular lesions or with gross forms of myocardial disease. Owing to the fact that the human mind is inclined to attach the greatest importance to that class

of phenomena which most strongly affect the senses, cardiac murmurs and irregularities have come to occupy a place in the mind of the average physician which is out of all proportion to their true significance. Seeing then that heart failure is a condition quite distinct from valvular disease and from gross forms of myocardial degeneration, the question arises: What is heart failure? Heart failure, from the modern viewpoint, may be defined as *that condition in which the heart is unable to maintain an efficient circulation when called upon to meet the efforts necessary to the daily life of the individual.* This statement, although perfectly simple and self-evident cannot be too strongly impressed upon our minds, as a proper realization of its significance gives us the key to all practical diagnostic and therapeutic procedures. When we come to study the mechanism of the circulation we find that the motive force is the ventricular contraction. The heart muscle therefore supplies the force which maintains the circulation and any process that disturbs the functions of the heart muscle or any impediment of the circulation that increases the work of the heart, necessitates the expenditure of more energy on the part of that organ. So long as the heart can maintain a normal circulation despite the alterations above referred to, no symptoms are evoked, but if failure of the circulation results, certain phenomena arise which we call symptoms of heart failure. *It is therefore apparent that heart failure is simply inability of the heart muscle to maintain the circulation and this failure of the muscle is due to too great a strain being put upon it.*

CAUSES OF HEART FAILURE.

Viewed from this standpoint it is easy for us to understand how a great variety of conditions may bring about heart failure. For example, long continued periods of physical strain with insufficient periods of rest, may bring about heart failure through exhaustion of the heart muscle. Disturbances in cardiac rhythm impairing the force and regularity of contractions may result in exhaustion of the muscle and in circulatory failure. Arterial degeneration accompanied by high blood pressure may exhaust the heart muscle by increasing the force necessary to carry on an efficient circulation. Again, heart failure may be brought about by inability of the

muscle to overcome the disabilities created by a damaged valve and, lastly, certain conditions unassociated with any gross change in the cardiac structure, probably of toxic character, may produce functional disturbance of the heart muscle which leads to inability of the muscle to meet even ordinary demands that are made upon it and consequently exhaustion of the muscle and circulatory failure follows.

REST FORCE AND RESERVE FORCE.

As the heart normally possesses the power of maintaining an efficient circulation, not only when the body is at rest, but also under varying conditions of physical activity, we may, for purposes of clinical consideration, divide the power of the heart into what may be called "rest force" and "reserve force."

The "rest force" is the minimum force that the heart can exert to maintain the circulation at a level consistent with life. Impairment of the "rest force" produces those evidences of heart failure which persist when the body is at rest, such as dropsy, dyspnoea, etc., and the continuance of such impairment eventually leads to death. The "reserve force" is that potential energy of the heart which is called upon when the individual makes some bodily effort. The functional efficiency of the heart depends on the amount of this "reserve force," and it is by estimating the "reserve force" that we recognize the presence and degree of heart failure. Heart failure then invariably begins by exhaustion of the "reserve force" and proceeds until the "rest force" is encroached upon. Exhaustion of the latter force invariably results in death.

SUBJECTIVE SYMPTOMS THE FIRST INDICATION OF HEART FAILURE.

The early recognition of heart failure is a matter of great importance from a diagnostic and therapeutic standpoint. The physician who waits until edema of the extremities, passive congestion of the liver and cardiac dyspnoea appear before suspecting that the heart is incompetent, is rarely likely to secure satisfactory results in the management of his heart cases. As the disturbances leading up to heart failure are at first purely functional, it is to be expected that the *early*

symptoms are purely subjective and can be classified in the following manner:

SUBJECTIVE SYMPTOMS, OF HEART FAILURE.

- I. *Respiratory*—Shortness of breath, pressure over sternum, cough.
- II. *Cerebral*—Vertigo, mental fatigue, headache.
- III. *Gastro-Intestinal*—Flatulent dyspepsia, nausea, loss of appetite.
- IV. *Cardiac*—Pain, palpitation.

It is perhaps unfortunate that disturbances of sensation so predominate during the early stages of heart failure, as it is an exceedingly difficult matter to estimate the full diagnostic significance of any subjective symptom. We can avoid a great many errors in this respect however by adhering to the principle of never basing an opinion on a single sign or symptom. Corroborative evidence should always be looked for, and from a practical standpoint, we may say that *any symptom indicative of heart failure is always accompanied by corroborative evidence, either subjective or objective.*

The group of symptoms most commonly met with in the early stages of cardiac failure are those referable to the respiratory system. They include shortness of breath, suffocative attacks, a sensation of tightness across the chest and perhaps a cough. It is, of course, obvious that many of these sensations may be produced in a healthy heart when forced to work beyond a certain limit, but it is the too ready production of them which indicates the failure in cardiac power. For example, a patient will complain that he finds himself very short of breath and perhaps has a painful feeling in his chest after ascending the stairway of his home—an act which he has been accustomed to do for years without producing any abnormal sensations. Or, again, we will find that walking a little rapidly or performing some slight physical exertion will produce some impairment in the respiratory tract.

Paroxysmal attacks of breathlessness which suddenly awaken the patient from sleep and necessitate his sitting upright in bed, are by no means uncommon. The cough, which is usually dependent upon a secondary bronchial catarrh, may be dry or may be accompanied by the expectoration of mucoid or muco-purulent sputum.

The most common cerebral symptom in heart failure is an impairment of memory for recent events. Vertigo, especially on ascending the stairs, or after exertion, is frequently met with.

Accompanying the respiratory disturbances, may be pain around the heart or sensations of disturbed cardiac rhythm such as palpitation, thumping of the heart, etc. The character of the pain varies greatly and it may be referred to various situations, most commonly it is felt in the precordial region, occasionally in the epigastrium, or under the clavicle.

Palpitation is most common when the rate of the heart is accelerated and is particularly noticeable in cases of extra systole and auricular fibrillation.

Symptoms referable to the gastro-intestinal tract are frequently present, the result of venous congestion of the stomach, liver and other abdominal organs. Flatulence, with or without pain, is perhaps the most common, and by interference with the movements of the diaphragm may set up disturbance in the action of the heart or embarrass respiration. Loss of appetite, nausea and vomiting, constipation, and a feeling of soreness in the region of the liver, are very common phenomena.

After persisting some weeks or months, these symptoms may gradually progress until the more advanced evidences of cardiac failure manifest themselves, notably edema of the lower extremities, cyanosis, enlargement of the liver, etc.

PHYSICAL SIGNS OF HEART FAILURE.

- I. Disturbances in rate and rhythm of pulse (premature contractions, fibrillation, alternation).
- II. Enlargement of the area of cardiac dullness.
- III. Impaired muscle tone in first sound.
- IV. Weakness or accentuation of second sound.
- V. Murmurs of any variety.
- VI. Passive congestion, oedema of legs, swollen liver, cyanosis.

While the subjective symptoms especially those which are induced by exercise are of the foremost importance in the recognition of early cardiac failure, there are certain objective phenomena of distinct corroborative value which should always be carefully searched for. The first object of

our investigation should be the pulse. Acceleration of the pulse to an abnormal degree after exertion is present in practically all forms of cardiac failure, except that associated with heart block. Disturbances in the rhythm of the heart are also of great importance. The most common types of arrhythmia found in adults being extra systoles and auricular fibrillation. Extra systoles of themselves are not inconsistent with a perfectly normal heart, but when found in conjunction with other symptoms of cardiac failure, they must be regarded as pathological. Auricular fibrillation is always pathological. Its existence indicates serious changes in the cardiac muscle and if not controlled it ultimately leads to exhaustion of the heart muscle and even to death.

Percussion of the chest shows that an enlargement of the area of cardiac dullness to a greater or less degree is found in a large proportion of cases of cardiac failure. Too much importance, however, should not be placed upon this finding, as pulmonary emphysema frequently occurs in cardiac cases, thus obscuring the area of cardiac dullness. While dilatation of the heart is almost invariably present in severe forms of cardiac failure, the condition may be quite well advanced before obvious changes in the size of the heart can be demonstrated.

The auscultatory findings are naturally of great interest and importance. The most characteristic alteration being a loss of muscle tone of the first sound as heard at the apex. The first sound becomes short and mushy in character, often simulating the second sound. The character of the second sound as heard at the aortic and pulmonary areas varies greatly. In some instances both of these sounds are feeble, while in other cases one or the other sound is distinctly accentuated.

Murmurs may or may not be present, but when present, are no criterion in themselves as to the degree of cardiac failure. We can form no opinion of the functional capacity of the heart from the character of the murmur present.

MEDICAL AND BORDER LINE COMPLICATIONS OF THE TONSIL OPERATION.

BY

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(Read before the Clinico-Pathological Society, November 1, 1917.)

LITERATURE during the past ten years contains the description of many methods of removal of the tonsils. Special instruments for this procedure have multiplied rapidly until it would seem that before a laryngologist could hope for recognition he must needs invent a new instrument. The control of hemorrhage has taken up much space in the writings of many. Glowing accounts of wonderful cures and happy results following tonsillectomy are recorded. In view of all this surgical knowledge and the fact that the tonsil is now considered as one of the foremost factors in focal infection, an unbelievable number of tonsillectomies are being performed. From some of our observations it would seem that this surgical procedure has not as yet been accorded due respect, it being considered by the laity and many members of the profession a minor operation. Indeed, in one of our well known institutions cases are tonsillectomized in the morning and sent to their homes in the afternoon. There are many operators who perform this operation in their offices and send the patient home. This lack of proper consideration is gradually being corrected. Members of the profession are slow to report errors or failures and in some instances complications develop late and are not connected with the operation. Many of the cases tonsillectomized are never seen after the operation has been performed. However operators who follow their cases more closely and have been sufficiently courageous to voice their less favorable results impress us with the fact that the complications of the tonsil operation are of sufficient gravity to consider them seriously when advising the removal of the tonsils. Tonsillectomy whether performed under a general or local anaesthetic is a major operation and the patient who is to undergo this operation is deserving of the same pre-operative consideration and post-operative attention of other major operations. This makes it a hospital

case, calls for an investigation of the patient's general condition, examination of the heart and lungs, investigation of the renal function, blood examinations and observation of the blood pressure. Post-operative care is determined by demands of the individual case but most certainly calls for detention in the hospital until the patient has thoroughly recovered. This will vary depending upon the age of the patient and his reactive powers. This is a point which must be made clear to hospital managers for they have been educated to expect tonsiloadenectomy cases to leave the hospital the day following the operation. This is, in many instances, hazardous. In private practice we have observed during the last few years patients appreciating the precaution of having them remain in the hospital a few or several days depending upon the case. In our work in Dr. G. J. Palen's Clinic at the Hospitals of the Women's Homœopathic Association, we insist upon the operated ward cases reporting to the out patient department twenty-four hours after dismissal from the wards, and thereafter every few days until the wounds have healed. In this way we keep in touch with them and observe any delayed complications.

The object of this paper is to record some of the medical and borderline complications of the tonsil operation with the idea of emphasizing the necessity for careful attention to this generally accepted trivial operation and the necessity for close after observation.

Hemorrhage following tonsillectomy may present a medical aspect in so far as the bleeding depends upon factors having to do with the coagulability of the blood. Usually the control of hemorrhage immediately following the enucleation of the tonsils is a matter of surgical technique and when bleeding persists in spite the proper application of this, we have to think of the possibility of delayed coagulability. This is a matter which should be determined before attempting the operation if we would properly safeguard our patient. To question the patient or the parent concerning a family or personal history of bleeding will apply to cases of true hemophilia. There are, however, other cases with slow coagulation and bleeding tendency which has developed later in life. The clinical condition known as hemophilia usually manifests itself in early infancy in prolonged bleeding from the cord or alarm-

ing hemorrhage may occur with the eruption of the teeth or upon circumcision. In this condition coagulation is slowed but this is not due to deficiency in fibrinogen. There is a diminution of prothrombin without an excess of antithrombin. The formation of thromboplastin may not be sufficient to counteract a normal amount of anti-thrombin. It is generally conceded that true hemophilia is a congenital condition occurring in the males of certain families and persisting throughout life. It is transmitted by the women who in themselves are not bleeders. It is met with in all nations especially noted in the Germans. In such cases it would be hazardous to even prick the ear lobule or finger to carry out the coagulation test. If these contentions are correct then we have to look to other conditions in many of our so-called bleeders.

Tendency to excessive bleeding may be a manifestation of hypothyroidea. It is well, therefore, to observe closely for signs denoting deficient thyroid secretion such as stunted growth with tendency to adiposity, dryness of the skin with infiltration or eczematous changes, glandular infiltration, constipation with meteorism, streaked brittle nails, hair poorly nourished, tendency to blepharitis marginalis, teeth tending to decay quickly and nocturnal enuresis. These patients usually present a sub-normal temperature and are constantly complaining of chilliness, cold hands and feet, they react slowly, are not keen and active and they may present recurrent jaundice. To enumerate all the symptoms of hypothyroidea would tire and confuse. Once seen it is easy of future recognition.

A differential blood count with especial investigation as to the eosinophiles will aid in concluding the presence or absence of a bleeding tendency. An estimation of the hemoglobin will offer valuable information as to the presence or absence of anemia.

Secondary or delayed bleeding we have observed as late as seven days following the operation. These late hemorrhages are due to a low grade sepsis, a breaking down of the clot in the vessels or a sloughing of tissue. In one case, a little girl, was operated without accident or complication. She was detained in the hospital forty-eight hours and sent to her home. Two days later throat inspected found in good condition. On the seventh day severe bleeding occurred from a small vessel in the left fossa. Another case of delayed bleed-

ing occurred in a girl fifteen years of age. There was no post operative bleeding and she was dismissed from the hospital at the expiration of forty-eight hours. On the seventh day there was a severe bleeding from one fossa. Pressure controlled this. The third case was a boy of four years operated without complication or excessive bleeding. We saw this case two days after discharge from the hospital and that same night arterial bleeding occurred from the left fossa. It was necessary to ligate the vessel.

A very serious and at times a delayed complication of the tonsil operation is abscess of the lung. It has occurred perhaps more frequently than reported cases would indicate. This is explained by the fact that lung abscess may not manifest itself by symptoms for a week after the operation, and gives the patient an opportunity to pass beyond the operator's observation; this might especially happen to dispensary cases.

Manges (*American Journal of Surgery*, March, 1916) reports nine cases of abscess of the lungs after tonsillectomy. Two of his cases manifested pulmonary symptoms on the first day; on the seventh day two cases and on the tenth and fourteenth day one case each. This author believes that aspiration of blood or pieces of tonsil tissue to be the most important cause. He also calls attention to the occurrence of embolism or infarction of the lung by way of open veins in the tonsillar fossa and this may occur at the time of the operation or several days later.

Richardson (in the *Laryngoscope*, June, 1913) reports two cases diagnosed infarct of the lung. The first occurred in a man of forty-five years of age. For six days following the tonsil operation, there was a moderate fever. The patient went to his home and was lost sight of for ten days, at which time he was running a septic temperature, coughing constantly and complaining of intense pain located in the base of the right lung. An area of dullness with moist rales was observed over the base of the right lung posteriorly. Several weeks later full evidence of abscess of the lung developed. This was operated and patient recovered.

The second case occurred in a young female of twenty-four years. The operation was accomplished without difficulty and attended with very little bleeding. Convalescence was slow. She developed cough on the tenth day accompanied by a moderate septic temperature. Physical signs at this

time were negative. On the thirteenth day the cough was paroxysmal in character and the patient expectorated quantities of offensive purulent secretion and complained of this odor whenever she coughed. The expectoration material contained large numbers of pus cells and the streptococcus was isolated. Physical examination at this time revealed a small area of consolidation between the second and fourth ribs on the right side with small moist rales. This condition existed for three weeks and recovery was gradual.

Le Play reports a case in a child of eight years, operated for enlarged tonsils. Eight days following operation developed pulmonary symptoms. Physical examination showed dullness of left lung with an expiratory egophonic souffle. A pleurotomy was done and an abscess cavity drained. Culture of the pus demonstrated the presence of pneumococcus. This case, in the author's opinion, was embolic in origin.

We have been fortunate to have, thus far, escaped this complication, due in part, we believe, to our technique. The use of a suction apparatus has revolutionized the tonsil operation. It is possible by means of this to keep the field of operation free of blood and every step of the work can be directed by visual guidance. It furthermore does away with the mopping of the throat with gauze or cotton tampons, which procedure causes so much bruising of the tissue and resulting post-operative soreness. It materially aids in the control of bleeding, enabling the operator to find bleeding points quickly. Since most of the reported instances of lung abscess and other lung complications following the tonsil operation occurred in cases operated under a general anaesthetic, advocates of local anaesthesia have seized this point as a further reason for the performance of the operation under local anaesthesia.

Pneumonia and pleurisy have occurred following the tonsil operation and sufficient cases have been reported to indicate that it is not of infrequent occurrence. Here, of course, it is necessary to eliminate the anaesthetic as a causative factor. We have been unfortunate enough to have had this complication develop in one case. A female child of seven developed a secondary hemorrhage which necessitated a second anaesthesia. Two days later developed temperature and increased respiratory rate. The medical department reported a bronchopneumonia. The child was removed from the hospital at the

parent's risk and the child died several weeks later. Perhaps it went beyond a broncho-pneumonia.

High temperature without discoverable cause is occasionally observed following tonsillectomy. Wishart (*Laryngoscope*, February, 1909) reports a case of a young female patient eighteen years of age who presented no symptoms other than enlarged tonsils and adenoids. The tonsil crypts were filled with detritus. Tonsillectomy was performed under a general anaesthetic and accompanied by moderate bleeding. After the operation the temperature rose a degree per hour until the temperature reached 107 degrees F. The patient died twelve hours after the operation. No autopsy was performed.

Richards (*Laryngoscope*, June, 1913) reports a case in a child of four years. The temperature just before operation was 99.4 degrees F. The operation was accomplished without complication. That evening at 10 o'clock the temperature rose to 107 degrees F. and at 11.15 the patient died. Autopsy showed no blood in the stomach or intestines and all the organs presented normal microscopic appearances. In two instances we have noted temperature of 103 and 104 degrees F. within six and eight hours following the operation, but this declined rapidly without further symptoms.

Acid intoxication occurs as a complication of the tonsil operation. This disturbance of metabolism of the fat splitting and to a lesser degree the protein splitting elements is characterized by symptoms of varying degrees of intoxication. This condition occurs in mild forms perhaps very frequently and is overlooked. Marked cases present a clinical picture which is not mistaken nor readily forgotten. That it occurs in connection with adenoid and tonsil work in children is readily appreciated. The necessary starvation and administration of an anaesthetic with its attending solvent properties, the modification of the carbonic acid content of the blood, together with the absorption of toxins from chronically infected tonsils combine to upset the metabolic balance which is so delicately adjusted in childhood.

Three degrees of post operative acidosis have been described:

1. *Sub-acidosis*.—Acid products without symptoms.
2. *Acidosis*.—Definite symptoms, vomiting and marked restlessness.

3. *Acid Intoxication.*—Delirium, coma, convulsions, preceded by restlessness and vomiting.

The detection of the tendency to acidosis requires a well equipped laboratory, for it involves the determination of the amount of ammonia and its relation to the nitrogen output, the testing of the alveolar carbon dioxide tension, testing the blood plasma for its bicarbonate content and testing the reaction of the blood. Practically, however, we can guard against the development by examining the urine, by withholding meat diet and giving a vegetable diet for several days preceding the operation. It is better not to starve the patient too long before the operation time but allow food as late as possible. The administration of the anaesthetic should be executed with as little excitement as possible and the amount of the anaesthetic should be kept at a minimum. The administration of ten to fifteen grains of bicarbonate of soda three times a day for several days before the operation and a dose of forty-five grains per rectum one half hour before operation is suggested if there is a tendency to acidosis.

A large percentage of children will, after the administration of an anaesthetic, show acetone in the urine some time during the first twenty-four hours. This is the first of the acid bodies to appear in the threatened acidosis cases and is followed by diacetic acid and betaoxybutyric acid. As the condition subsides these acids disappear in the reverse order and from a prognostic standpoint this information is valuable.

The pulse is the dependable indication in post-operative acidosis. If, after a period of time after the operation, this depending upon the length of operation and loss of blood, the pulse shows little tendency to lower or if it remains stationary and there are lacking the signs of hemorrhage or shock, the urine should be examined for acetone. In fact it is our practice if this condition of affairs exists, to give the patients bicarbonate of soda per mouth, or if vomiting prevents, it is administered per rectum.

Other symptoms of this condition are vomiting, cyclic in character, associated with restlessness, although the patient is very drowsy, and presents subnormal temperature. In a case recently operated we were asked to see the patient because of symptoms of constant vomiting, restlessness, great thirst, sub-

normal temperature, and very rapid pulse, 140. The interne felt sure there must be bleeding. Arriving at the hospital we found the child thrashing about the bed with an anxious look crying for water which when taken was quickly ejected. The mucous membrane of the lips was of a good color. The throat was dry, there was no bleeding. Rectal administration of sodium bicarbonate quieted the little patient in a few hours. The first specimen of urine examined showed acetone although the specimen examined prior to operation did not show this acid.

Dupuy (*Laryngoscope*, February, 1913) reports a death during tonsillectomy from reflex inhibition. The anaesthetic employed was ethyl chloride followed by ether. The operation was exceedingly difficult and complicated by troublesome bleeding. Breathing was suspended four times but relieved by artificial respiration. The fifth time the respiration ceased fifteen minutes after the anaesthetic was discontinued. Pulse remained good but all attempts at resuscitation, including tracheotomy and artificial respiration, traction on the tongue and oxygen were of no avail.

Many patients presenting hypertrophied tonsils and adenoids also exhibit enlarged lymphatics. In this connection the thymus gland is to be thought of. Subjects of status lymphaticus are prone to develop respiratory difficulty followed by sudden death when subjected to anaesthesia. The real nature of this condition is not understood, but so-called cases of thymic death have exhibited post mortem an enlarged thymus. Asthmatic attacks in children should lead to an investigation of the thymus.

Packard reports the sudden death of a patient which he believes was due to status lymphaticus. The patient was three and a half years of age and apparently a healthy child, except for a sallow complexion. There was no bleeding following the operation which was done at 1 P. M. The child was examined at intervals of an hour until 6.20 P. M. when the temperature was 100 degrees F., respirations 36 and pulse 156. At 7 P. M. the child stopped breathing. Tracheotomy was performed but to no avail. No autopsy was obtained.

Harris reports a case of status lymphaticus in a patient operated upon under cocaine adrenalin infiltration. The patient was profoundly impressed by the first injection, vomited and had a slight convulsion. At the completion of the oper-

ation the patient was unconscious and all efforts at resuscitation failed. At autopsy the right auricle was swollen and the auricular appendage was dilated with blood until it was five times as large as the left, the right ventricle was also swollen, the thymus gland was hypertrophied and weighed eighteen grammes. Examination of the thymus gland demonstrated there was no atrophy. Dr. Harris believes the patient died of an over-dilated right ventricle due to the enlarged thymus with its action on the trachea and recurrent laryngeal with cocaine adrenalin injection as an exciting cause.

Of the disturbances of the nervous system following the tonsil operation Richards found the records of two cases. One case reported by Bergh occurred in a female child seven years of age. Immediately following the operation there was an attack of strangulation followed by spasmodic contraction of the thighs on the abdomen. These attacks gradually lessened until they disappeared. The second case recorded by Pfingst occurred in a robust young woman eighteen years of age. This patient developed a hysterical hemiplegia one week after a tonsillectomy. The condition improved gradually.

Gracey (*Laryngoscope*, January, 1917) reports a case of hemiplegia following tonsillectomy. In the report of this case the author brings out the fact that the patient had on the third day after operation been indiscreet in his diet and had exposed himself to the cold wind. He developed a chill and pain in the region of the right frontal sinus, and his temperature was 105 degrees F. Locally there was some mucus from the right middle meatus. Bloodcount showed leucocytes 15,600 with a normal differential count. Blood culture twenty-two and seventy-two hours were negative. Lungs and heart were negative. Culture of throat to Klebs Loeffler bacillus was negative. Seven days after the operation he was restless, stupid and developed a left hemiplegia. The reflexes were not as marked on the diseased as on the sound side but there was some spasticity. No Kernig or Babinski. Disturbances of sensation were present. Cerebral embolism was diagnosed. The spinal fluid showed 118 cells per CMM. Globulins plus., Fehling's plus, culture negative. Both the blood and spinal fluid gave a negative Wassermann. There were some focal convulsions.

The author feels that a negative spinal culture on two occasions by reliable workers would seem to rule out the pres-

ence of a general meningitis. He feels that a probable diagnosis seems to be an embolism in the motor area, septic or non-septic in type, probably the former, sufficient to produce a left hemiplegia causing irritation in the motor area as shown by the Jacksonian type of convulsion and causing an adjacent localized meningitis sufficient to raise the cells in the spinal fluid without producing a general meningitis due to any discoverable organism.

Scrutton (*Laryngoscope*, February, 1917) reports a case of hemiplegia occurring immediately after tonsillectomy. The patient, a female child of eleven years, was apparently in good health before the operation. Tonsillectomy was performed by an inexperienced man and one tonsil had to be fished out. The operation consumed twenty-five minutes. The first record of the paralysis is 6 A. M. of the day following the operation when the child was requested to leave bed but was unable to move. The temperature rose gradually to 101.8 degrees F. forty-eight hours after the operation, to return to normal over a number of days. Recovery from paralysis was under way within seventy-two hours. It began in the leg and shortly after was manifest in the arm. In two weeks she began locomotion and was able to leave the hospital eighteen days after the operation. The author is of the opinion that the hemiplegia was caused by either brain pressure or brain softening. Thrombosis was eliminated because of lack of prodromal symptoms and it is very unusual in so young a subject. Hemorrhage might have been caused by straining and excitement at the time of taking ether, or the strain of vomiting. This was eliminated because these factors were lacking. The opening of vessels at the time of operation is a definite factor in the causation of an embolus. Examination of the patient six months after the operation shows the leg to have entirely recovered, a condition of athetosis exists in the foot, the arm has recovered control of all movements but the execution is slow. Athetosis is established in the hand; the face still shows paralysis at the angle of the mouth. Dr. Scrutton closes his report by saying, "a truly tragic condition resulting from the generally so-called insignificant tonsil operation."

General sepsis following the tonsil operation is reported. Mild cases are commonly observed and especially, in our experience, in those cases which come to operation with a history of quinsy or rheumatism. Severe septic conditions are only

occasionally observed. Sonntag reports a case in a lad of seven years. Two days following operation the patient felt ill and presented a torticollis towards the left side. On the third day delirium, headache and vomiting were present. The temperature was 39.6 degrees C. On the seventh day there was swelling of the knee and right wrist. Death occurred on the eleventh day from general sepsis.

Dean reports three cases of sepsis following tonsillectomy. In one case the patient was in poor physical condition at the time of the operation. Local anaesthesia was employed. Hemorrhage from the left tonsil caused the operator to stop before the gland was completely enucleated. The wound surface and glands of the neck were greatly inflamed the day of the operation. Temperature ranged between 102 and 103 degrees F. There was difficulty in swallowing and breathing. On the third day there was delirium, dimness of vision, and vomiting. The urine output became progressively less. On the sixth day all the lymphatics of the body became enlarged, delirium became pronounced and the patient died.

The second case was diagnosed thrombo-sinusitis. The patient was a boy fourteen years of age operated under local anaesthesia. He did not remain in the hospital after the operation and was not seen until a week following. At this time the stumps of the tonsil (a tonsillotomy had been performed) were covered with exudate. The temperature was 105 degrees F., had been intermittent and he had had a series of chills. A cord-like mass presented along the anterior border of the sterno cleido mastoid muscle. There was left sided exophthalmos and pan ophthalmitis. The right eye ground showed a well-marked optic neuritis. The ears and mastoids appeared normal. Physical examination negative. The author's opinion was that there occurred a septic phlebitis involving the internal jugular and extending along the cerebral sinuses to the orbital veins, accompanied by thrombosis of the orbital veins on the left and perhaps the left cavernous sinus. The patient recovered.

The third case reported was a gangrenous condition of the muscles of the neck. Extensive infection of the glands of the neck occurred necessitating free incisions.

Ballenger has reported two severe cases of streptococcus infection following tonsillectomy.

Scrutton (*Laryngoscope*, January, 1917) reports a case of

septicaemia with poly-arthritis and pulmonary infarct following the tonsil operation. The patient, a female twenty-eight years of age, presented a history of recurring attacks of tonsillitis and rheumatic pains in the joints. She had an attack of acute otitis media for which incision of drum had been performed. Culture of the secretion from the ears showed a streptococcus. The acute otitis subsided in ten days. One month later tonsillectomy was performed under a general anaesthetic without accident. On the fourth day temperature reached 101 and patient had severe pains in the back. For the following fourteen days there was a low grade septic temperature. On the fifteenth and sixteenth days the afternoon temperature was 103 degrees F., followed by lysis to the twenty-sixth day. During this febrile period various joints became painful without swelling or redness. Blood counts averaged a leucocytosis of 14,000, polynuclear percentage 75 with marked secondary anemia. The urine contained albumin, hyaline and granular casts. Blood culture on the 26th day showed a marked streptococcus hemolyticus. On the sixteenth day after the operation sub-crepitant rales were heard over the right lower lobe, the patient complained of pain in the right side of the chest and coughed frequently, expectorating quantities of brown streaked tenacious mucus. The day following, the chest examination revealed dullness over the lower portion of the right lower lobe, increased fremitus, diminished breath sounds, and loud subcrepitant rales only on coughing or deep inspiration. The patient recovered and was discharged sixty-eight days after the operation.

The occurrence of joint manifestations in rheumatic subjects following tonsillectomy is not unusual and most operators who have operated on this class of patients have experienced this. It is probably the last charge from the "old magazine."

Oedema of the glottis following the tonsil operation has been reported by Myers (*Laryngoscope*, February, 1917). The author encountered this complication following the enucleation of a tonsil from the throat of a physician. The anaesthetic employed was quinine and urea hydrochloride. Some difficulty was experienced in separating the tonsil from the posterior pillar. Very slight bleeding followed the operation. At midnight the patient developed shortness of breath, puffiness of the face and great anxiety. Examination of the

larynx showed infiltration of the glossoepiglottidean folds. The use of ice adrenalin and cocaine relieved the condition.

Parrish reports a case of emphysema following tonsillectomy. During the operation a small buttonhole was made in the lower part of the posterior pillar on the left side. As the patient was being removed from the operating room there was struggling for breath, the face and neck were swelling rapidly. By the time the physician reached the child the breathing was rapid and shallow the face livid and the lips cyanosed. The entire neck was so puffed that the line of the jaw was obliterated. Emphysematous crackling was present and the process extended over the anterior portion of the chest down to the last rib. Opening the mouth and hyper-extension of the head relieved the difficult breathing. The condition gradually absorbed and patient recovered.

Richards encountered this complication in a case of an adult male. It appeared one hour after the operation and involved the right side of the neck and extended down almost to the line of the clavicle. It subsided in twenty-four hours.

Rarely following tonsillectomy, a rash appears. This usually occurs on the second or third day and takes the form of a roseolar, papular or erythematous type. It appears first on the chest, then the abdomen and limbs. It may or may not be associated with itching and slight elevation of temperature. The condition lasts but a few days and while of minor importance may cause much anxiety. It is probably due to auto-intoxication by the blood which has been swallowed and the liberation of a toxine from the tonsil.

Diphtheria occurs following tonsillectomy but seldom. When it does occur it is perhaps because the patient is a carrier or has been exposed just prior to the operation. One observer suggests culturing every case before operation is performed. Certainly this is a wise precaution in cases which have been exposed.

Torticollis following the tonsil operation has been reported by Hedge and Ardt and in both instances it was ascribed to sepsis. While this may be true it would seem that perhaps the position of the patient on the operating table would also play some part in this complication.

These, then, are a few of the unpleasant things that may occur to complicate the tonsil operation and while they fortunately occur but seldom they must be kept in mind and our patient thoroughly inspected before being subjected to this operation.

EDITORIAL

IN MEMORIAM.

THE death of Dr. Daniel P. Maddux at his home in Chester, Pennsylvania, on January 3, has cast a gloom over the entire profession in the State of Pennsylvania. Dr. Maddux was a tower of strength to the homœopathic profession. His talents and enthusiasm made him an invaluable worker in our State and National societies and his zeal and interest in the advancement of medical education rendered his work on the Board of Medical Education and Licensure of great importance to the Commonwealth and reflected credit on the entire homœopathic school.

The list of important official positions held by Dr. Maddux during his professional career is too long to mention. Among other positions of trust may be recalled his presidency of the Homœopathic Medical Society of the State of Pennsylvania and his recent election as a trustee of the American Institute of Homœopathy. But, however valuable may have been his work in these fields of public activity, it is his loss as a personal friend and companion that weighs most heavily on a large proportion of the homœopathic practitioners of this State. "Dan" Maddux, as he was so fondly called by many, won a place for himself by his genial and friendly disposition in the hearts of those who came in contact with him, that could not be attained by mere work or merit. In all his dealings with his fellow practitioners, Dr. Maddux manifested a spirit of charity, mingled with justice, in such a way as to win the respect and confidence of all.

His devotion to his Alma Mater and his untiring efforts to place Hahnemann College among the foremost of the medical institutions of the country, contributed to a very large degree to the numerous advances and improvements that have taken place in the work of Hahnemann College during the past six or eight years.

It will be recalled that Dr. Maddux became a member of the medical board, as now instituted, at its beginning about six years ago. At that time there was considerable agitation

throughout the country for improving the curriculum and methods of teaching in our medical institutions and Dr. William B. Van Lennep, who was then dean of the College, was compelled to face many problems that would have discouraged any one but a genius. The manner in which Dr. Van Lennep overcame these difficulties which remade Hahnemann, as it were, into a new institution, is now a matter of history. During these trying times, Dr. Van Lennep frequently sought the advice of Dr. Maddux and, we have heard him testify on numerous occasions to the invaluable assistance and to the many practical suggestions offered by Dr. Maddux during this reconstructive period.

We have no doubt that there has arisen in the minds of our readers several times, the question—"who will take the place of Dr. Maddux?" There is but one answer to this question: No one can take his place. Fortunately, however, we have the example of his life and work as an inspiration to those who knew him and we believe that he has not labored in vain but that the work which he has so well started will inspire many to work the harder for the elevation of their profession and for the progress and development of "Old Hahnemann."

G. H. W.

THE TURNING TEST IN APPENDICITIS.—Blaisdell (*The Archives of Diagnosis*, July, 1917) believes this test to be original with him, having employed it for the past twelve or fourteen years. If it is not original it is a tale that bears telling twice.

When you enter a room where there is a case of suspected appendicular trouble you will rarely, if ever, be the attack acute or otherwise, find the patient lying on the left side. He will almost always be lying on his back or on the right side. You ask him why he lies on his back or right side and he replies that it hurts him when he turns on the left side. That was the first thing which made me ask "Why is that?" Since that time it has always been my procedure to use this turning test and in ninety per cent. of all appendicular troubles, or those involving an inflammatory condition of the appendix, *the pain is increased when the patient is turned to the left and diminished when he is turned back on his right side.* The pain is not so intense when the patient is on his back as on the left side. If every other symptom is absent, Blaisdell always advises operation if that test is marked and in over ninety per cent. of my cases it has proved to be correct.

In making the test the abdomen must not be allowed to touch the bed, thereby allowing the viscera no support when it pulls to the left and drags along the sensitive appendix thereby causing additional pain. With a rapid pulse, with or without temperature, and the turning test present, operate.

GLEANINGS

DIARSENOL ADMINISTERED BY BRAYTON'S SIMPLIFIED METHOD OF GIVING SALVARSAN.—In *Colorado Medicine* for June, 1917, Low states, since reading Dr. F. A. Brayton's article on the simplified method of administering salvarsan, he has been using it in giving diarsenol, the Canadian product.

This method is very simple, the time expended from the beginning of sterilization until the procedure is completed being only twenty minutes.

The apparatus used consists of:

1. One 30-Cc. Luer syringe with needle.
2. One glass-stoppered 60-Cc. shaking bottle containing 25 glass beads.
3. One bottle of 15-per-cent freshly prepared solution of sodium hydroxide, with medicine dropper.
4. One 50-Cc. glass funnel.

The above described apparatus is sterilized by boiling in freshly distilled water in an eight-inch aluminum pan. The shaking bottle, containing 30 Cc. of water, is removed from the pan and the diarsenol added. It is then shaken until a clear amber solution exists. Fifteen-per-cent sodium hydroxide is then added until the precipitate which at first forms is dissolved.

The solution is now poured into the glass funnel, in the bottom of which is a pledget of sterile cotton, and filtered directly into the barrel of the syringe. Insert the plunger, attach the needle, and express any air from the syringe. Proceed as in any intravenous injection. The arm is prepared by washing with soap and water, drying with ether, then applying 10-per-cent tincture of iodine over the area.

It is readily seen that both time and labor are saved by this method. The solution can be injected in from thirty to forty seconds, while with the gravity method it takes from ten to fifteen minutes. One can always be sure the needle has not passed through the vein by withdrawing the plunger slightly and noticing the blood mixing with solution, if the needle is in the lumen of the vein. No air can enter the vein in using this method.

In a series of twenty-five injections by this method, during the last two months, Low is convinced that the reaction is less than when using larger amounts of water. The so-called "water faults" are practically eliminated. Diarsenol gives less reaction than salvarsan; its influence on the Wassermann test is positive; its toxicity is lower; and finally, this method is an office, one-man procedure.

GASTRIC ULCER.—Levy says the Rontgen rays give us valuable aid in the diagnosis of ulcer of the stomach. The signs may result either from anatomical or physiological disturbance. In general it may be said the more chronic the ulcer, and the greater the anatomical deformity resulting therefrom, the more certain the Rontgen diagnosis. The ulcer leading to pyloric obstruction, to hour-glass deformity, to the "Nische," is readily diagnosed. In some acute cases the incisura, the delayed motility due to pylorospasm, and the sensitive spot, are suggestive. In some cases, especially in the very superficial ulcers, the X-ray findings may be negative.

Among the anatomical signs, the incisura is sometimes encountered with ulcer. It results from a spasmodic drawing in of the wall of the greater curvature. The incisura, when present, is quite constant. Atropine may, however, relax it. It is also encountered, but more rarely, with ulcer of the duodenum, with gall-bladder disease, with chronic appendicitis, or any other irritation of the gastrointestinal tract.

The chronic ulcer with pyloric obstruction is readily recognized. The stomach is enormously enlarged, and owing to the atony the opaque meal drops to the bottom of the organ. The peristaltic waves are usually shallow, although in some cases exaggerated as the result of hypertrophy of the walls. There is a marked disturbance of the motor function, the bismuth sometimes remaining in the stomach for days. The rest is half-moon shaped, and considerably to the right.

Haudek has called attention to the "Nische" as a symptom of ulcer. It is found in chronic ulcers with a crater, and particularly in ulcers that have penetrated into neighboring organs like the liver or pancreas. When the crater of the ulcer is still within the stomach wall, it shows itself like a small bud projecting outward from the main bismuth shadow. It is usually found on the lesser curvature. When the ulcer has penetrated into the liver or pancreas, forming the so-called "Ulcus Penetrans Callosum" of Haudek, there is a large pocket in which the bismuth settles and remains. Above this there is a layer of fluid surmounted by a gas bubble. These ulcers are associated with hour-glass contraction, and consequently lead to characteristic deformity.

An hour-glass stomach is not infrequently encountered with ulcer, even without the "Nische." The stomach is made up of two pouches, the food first enters the upper pouch, and gradually finds its way through a narrow channel into the lower one. The deformity may be extensive, the connecting channel usually follows the lesser curvature. The diagnosis of hour-glass stomach rests entirely with the roentgenologist, and not with the surgeon. The operating table, with the stomach empty and collapsed, is not the place to make this diagnosis.

Haudek lays great stress on hypomotility as a sign of gastric ulcer. He claims that he always finds it in the florid ulcer. The delayed emptying is not necessarily due to the pyloric obstruction, but to the reflex spasm of the pylorus. While a six-hour rest is frequently encountered with gastric ulcer, it is not so constant that its absence rules out this lesion.

Holzknicht has called attention to "Schnecken" or "snail" form of stomach as significant of ulcer. The pylorus is found higher and more to the left than normal. In conjunction with other symptoms or signs, this form of stomach may be of some diagnostic value, but alone it is of comparatively little.—*Arch. Diag.*

EPIDEMIC MENINGITIS.—Simon Flexner (*Journal A. M. A.*, August 25, 1917) points out that this disease has been more or less endemic in this country and in Europe ever since the severe epidemics of 1904-05 and that it is prone to become epidemic wherever many men are brought together in close contact as in army camps. It is of the first importance to bear in mind that the source of infection under such conditions is the presence of one or more carriers of the organism. The carrier cases

are of two types: individuals who have the disease and those who are healthy but harbor the organism in their nasopharyngeal tracts. It is the latter which are the more dangerous, since they commonly escape detection until they have infected others. The mode of infection is usually via the nasopharyngeal mucosa and invariably arises from contact or association with a carrier. The infection may take two general forms: In the one the freshly infected person promptly develops symptoms and signs of the disease and is isolated; in the other the infected person may harbor the organisms in his upper respiratory tract for many days or weeks before falling ill, during which time he may transmit the infection to many others. The former type is relatively unimportant as a source of danger to his associates. In the presence of a case of meningitis appearing among a body of men, a search should be made to detect all carriers. This is not difficult if there is a reasonable bacteriological equipment and a few good bacteriologists are available. It consists in the taking of cultures, with the aid of the West tube, of the secretions of the nose and throat and growing them on suitable mediums. The meningococci can be recognized by the characters of their colonies, their fermentation reactions; their morphology, and best of all by means of agglutination tests against known serums. Every carrier should be isolated at once and kept so until repeated cultures are negative. By this means it is possible to check an epidemic at its inception and save many lives and much illness. The details of the technic of making the cultures and identifying the organisms are given in the paper.

CHRONIC VALVULAR HEART DISEASE IN PREGNANCY AND LABOR.—Foster S. Kellogg (*Boston Medical and Surgical Journal*, September 20, 1917) draws the following conclusions from a study of the chronic valvular diseases complicating pregnancy and labor in a material of nearly 30,000 cases: One to two per cent. of pregnant women have chronic endocarditis. Fifteen to twenty per cent. show some decompensation under prenatal care; half of these 1 degree decompensation; half 2 degrees decompensation. Cases with stenosis of the mitral valve, with or without insufficiency, are far likelier to decompensate in pregnancy than cases with simple insufficiency. The maternal mortality of chronic valvular disease in pregnancy is 2 per cent. The maternal mortality of cases showing 2 degrees decompensation, requiring induction, and 2 degrees decompensation in labor, is 45 per cent. Mitral stenosis is almost always present in fatal cases. Fetal mortality runs from 10 per cent., in a series including all cases, to 40 per cent. in cases with 2 degrees decompensation. Chronic valvular heart disease complicating pregnancy is, in view of these figures, potentially a very serious condition for mother and child, and the handling of these cases requires the utmost attention and skill, frequent prenatal observation being an absolute necessity in all chronic valvular cases complicating pregnancy. Half of these cases not under good previous care for their heart condition, which show decompensation, will recover sufficiently under medical treatment, rest, and the proper regulation of their lives so that they do not again decompensate, and so that they will stand any appropriate method of delivery at term. Many chronic valvular heart cases compensated and with only slight de-

grees of decompensation, and some with 2 degrees decompensation, will safely deliver themselves if allowed to. Though this fact is undeniably true, theoretically and with what data we have at hand it should not be allowed. Normal delivery and accouchement force have no place in the treatment of chronic valvular heart cases in pregnancy or labor. It is not justifiable to attempt to carry a woman who is decompensated to term for the sake of her baby unless she reacts favorably to treatment almost immediately, especially as the fetal mortality in these cases is so high that we risk the mother's life for the sake of a problematical child.

TRIPLE TYPHOID VACCINE.—Charles F. Craig (*Journal A. M. A.*, September 22, 1917) conducted a series of observations upon a group of men to determine the severity of the reactions following the use of a triple prophylactic vaccine, containing typhoid and both paratyphoid organisms. He also determined the agglutinins resulting for each of the organisms after such immunization at different periods of time following the injections. The reactions produced, both general and local, were not more severe than those usually resulting from the use of typhoid vaccine alone and differed from them only in showing slightly more frequent nausea and more delayed reactions. So far as the agglutinins were concerned, those against the typhoid bacillus were as high as after the use of this vaccine alone, while those for each of the paratyphoid organisms were equally high, although these for paratyphoid B did not develop and reach their height until later than the agglutinins against the other two organisms.

HINDRANCES.—Lack of studiousness is one of the reasons many medical men lag behind in the march of progress.

Laziness is another. Love of sport and pleasure, rather than application to the acquisition of knowledge.

Want of scrutiny and experience.

If a physician gets the baseball mania, he will lose business.

The people keep an eye on the doctor, and take note of his habits. If he is seen entering a "saloon" there are many persons who would not employ him, under any circumstances! There may have been a time when a dram-drinking doctor would be excused, but sentiment today will not tolerate it! Being almost any place but in his office will hurt him. If he keeps his office well, it will keep him.

Slipshod methods will ultimately lose him clients. Contracting debts he sees very little prospect of paying, will injure his reputation. He should pay as he goes, if possible; but if not able to do so, be prompt to settle your bills. Be a business-like man; and have a system to render accounts monthly. If they get old they will not be collectable.

Keep posted by reading medical journals, which record advanced thought and practical experience.

Don't tell the ills of your patients from one bedside to another. The sick don't wish their ailments "bandied" about from house to house. A physician should be very discreet, and rather close-mouthed. Many doctors are inclined to be garrulous, and put their foot in it, much

to the disgust of their patients. Such men can't hold patients. Be quiet, agreeable, and reasonably dignified. Do so and you will win.

DIAGNOSIS OF DUODENAL ULCER.—John B. Deaver says chronic appendicitis frequently presents the same hunger pains as in duodenal ulcer, hyperacidity is not unusual and many cases show the same chronicity as in duodenal ulcer. The main difference between the two is the freedom from discomfort in the duodenal ulcers between the attacks, while in appendicitis the flatulency and discomfort are apt to be constantly present. But these patients with "appendiceal indigestion" usually suffer more pain after certain kinds of food, especially starchy food and red meats. The pain, however, usually is not so severe as in duodenal ulcer and radiates downward. The latter being one of the main points in the differential diagnosis. In appendicitis exercise frequently increases the local discomfort—not so in duodenal ulcer. In fact, the appendix is found diseased in so many cases of duodenal as well as of gastric ulcer, that these latter may be considered secondary conditions; that is to say, the result of infection from some other organ with the evidence strongly in favor of the appendix as the *corpus delicti*. Deaver makes it a practice to remove the appendix in practically all cases of gastric and duodenal ulcer.

Some authors claim that it is almost impossible clinically to differentiate between gastric and duodenal ulcer, but he thinks there are enough points of variation to enable such a differential diagnosis with some degree of certainty. In distinguishing between the two we may to some extent be guided by the time relation of the ingestion of food and the onset of the symptoms. Although the chain of symptoms of duodenal ulcer is said to be not much affected by the location of the ulcer, it is generally conceded that the longer the interval between the meals taken and the appearance of the pain and the more prompt the food relief, the lower down will the ulcer eventually be found. Therefore, if pain appears soon after eating, in one-half to two hours, and the food relief is not prompt, we may logically expect to find a gastric rather than a duodenal location. Again the radiations of pain, if any, in duodenal ulcer are usually to the right, while in gastric ulcer the pain radiates to the left as a rule. The pain also is apt to be more constant than in duodenal ulcer. Vomiting is also more frequently a symptom of gastric ulcer, as is also hemorrhage, the latter usually in the form of hematemesis, while in duodenal ulcer it is more generally melenic.

Cholelithiasis presents rather more difficulty, but care in taking the history will usually enable the experienced clinician to forecast the true state of affairs. The diagnosis is oftentimes uncertain when adhesions exist between the gall-bladder and the stomach and the duodenum, or when the gall-stones have pushed toward the duodenum; hyperacidity being also a symptom of gall-stone disease, adds to the confusion. On the whole, however, cholelithiasis is marked by such severe colicky pain with sudden and unaccountable onset, and almost as sudden and mysterious cessation, that recognition should, as a rule, be easy. Lavage will frequently cut short an attack of biliary colic, but has no influence on the pain of duodenal ulcer. In this connection Moynihan mentions the gastric crises of tabes dorsalis, as a possible source of error in diagnosis.

Chronic cholecystitis very frequently clouds the diagnosis of ulcer, especially of the perforating duodenal ulcer. It presents the same chronicity, though the attacks do not last so long, the pain, hyperacidity and flatulency also present show a certain degree of relationship to food intake, while not infrequently the absence of typical jaundice in cholecystitis and its presence in duodenal ulcer, as noted in several of our cases, makes confusion worse confounded.

Symptoms similar to those of chronic pancreatitis or some pancreatic involvement, such as pancreatic lymphangitis, are not rarely met with in duodenal ulcer. This is not surprising in view of the close relationship existing between the duodenum and the pancreas and the frequent infiltration of ulcer into the pancreas itself and the close intercommunication between the pancreatic and the duodenal lymphatics.—*Arch. Diag.*, No. 1, 1917.

UNSATISFACTORY ANESTHESIA AND THEIR CAUSES.—Buchanan, in the *Journal of the American Institute of Homœopathy*, 1917, IX, has pointed out that the large, thick-necked, robust athlete, who has not been run down by sickness, gives the anesthetist the greatest trouble because of the period of excitement that is likely to occur. A preliminary dose of morphine or bromides is a great help in such cases. For spasm of the glottis, the author advises the introduction of an artificial airway after the jaw has been pried open with a wooden wedge. Rigidity of the abdominal muscles may be caused by the anatomical make-up of the person or by the position on the table with extended legs, as well as by too light anaesthesia. Patients presenting a history of blood infection with extreme rapid pulse are bad risks. In the author's opinion the higher the red blood count, the higher the ether resistance of the patient. In the discussion, Costain said that giving the patient more air will often reduce the abdominal rigidity, the patient being intoxicated rather than anaesthetized.—*Internat. Abstd. of Surg., Surgery Gyn. and Obst.*

THEODORE J. GRAMM, M.D.

WHEN TO USE THE CURETTE IN INFECTED ABORTIONS.—Polak (Brooklyn) says the selection of the method of treatment in an infected abortion depends upon the following factors: The period of gestation, the condition of the cervix, the amount of hemorrhage, and the presence or absence of sepsis. In the clean cases complete evacuation of the uterus under strict aseptic technique will leave the woman in the ideal condition to avoid complicating morbidity, provided she is not the subject of a gonorrhoeal endo-cervicitis at the time of the miscarriage. But the majority of abortions are not clean or they have been examined or packed through an unprepared vulvovaginal orifice. This the author has demonstrated by routine cultures. So frequently has the presence of pathogenic bacteria in the uterus been followed by parometrial exudates, when the uterus was routinely curetted without consideration of the contained bacteria, that for several years he has let all incomplete abortions absolutely alone, providing proper drainage was obtainable and the hemorrhage controllable. This treatment showed an amazing decrease in mortality and morbidity. For some months subsequently, however, these cases had menorrhagia, sometimes severe, and he has consequently

modified the routine. Now when a bleeding case is admitted the interior of the uterus is cultured. If negative the uterine contents are evacuated after giving pituitrin hypodermically. Following the relatively bloodless evacuation if pituitrin was given, the uterus is packed with gauze soaked in tincture of iodine and allowed to remain for twenty minutes. Routine examination has shown more than 60 per cent. of almost pure cultures of staphylococci or streptococci. Under these circumstances we should employ the expectant plan of treatment until a culture from the interior of the uterus shows no organism to be present, when the cavity of the uterus may be curetted and carefully iodized. If, therefore, the cavity is sterile, prompt evacuation with the curette after the preliminary use of pituitrin is the method of choice. If pathogenic bacteria are present, intrauterine instrumentation should be avoided until such time as the cultures are sterile. Should the bleeding be copious, the vaginal tamponade is suggested and the free use of pituitrin, until the uterine culture shows sterile, when evacuation may be resorted to with safety.—*Amer. Jr. Obs.*, Vol. 75-3-409.

THEODORE J. GRAMM, M.D.

BLOOD PRESSURE FROM THE STANDPOINT OF THE SURGEON.—Mueller summarizes the importance of blood pressure estimations in surgical cases as follows: 1. The anticipation of possible complications, such as hypertension and hypotension. 2. In recognizing shock and controlling its treatment. Here the estimation of the blood pressure is invaluable. In cases of traumatic injury the physician should at once estimate the diastolic pressure, and if it is below 80 mm., treatment should be instituted at once. Shock practically exists if the diastolic pressure falls to 60 mm. or less. Immediate placing of the patient in the inclined head-down position, intravenous injection of saline solution, and the application of heat should be instituted until the diastolic pressure rises and approaches 80 mm. Then and then only should operation be done. Too often the patient is hurried around from receiving ward to operating room and operated on while still in shock.—*Abstr. Int. Obstr. Surg., Surg. Gyn. and Obs.*, Vol. xxv, 239.

THEODORE J. GRAMM, M.D.

THE EVOLUTION AND RELATIONSHIP OF THE GREAT GROUPS OF BACTERIA.—Kligler says it is a difficult feat of the imagination to reconstruct the path of evolution of any group of organisms, especially that of the bacteria. Whereas among the higher organisms one is troubled by the lack of transitional types, the main difficulty among bacteria seems to be in the superabundance of intermediate strains. While among the former gross structural distinctions are the chief guides, among the latter one must mostly rely upon the finer biochemical and metabolic differences. The author believes an attempt to trace the evolution of these simple cells may well lead to a clearer conception of the organisms and the nature of their adoption to a saprophytic, parasitic or pathogenic mode of life. The evidence, little as it is, seems to point to these minute unicellular organisms as among the most primitive of living forms. The author attempts to trace the probable lines of evolution of the different groups of bacteria. While his schematic outline may be faulty and incomplete, still it seems to aid in showing the relationship of these organisms to one another as members of a single or diversified order.—*Abstr. Int. Abstr. Surg., S. G. and O.*, Vol. xxv, 239.

THEODORE J. GRAMM, M.D.

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EYE INJURIES: THEIR TREATMENT.

BY

DR. J. W. STITZEL, HOLLIDAYSBURG.

It is not my purpose in this paper to enter into a technical discussion of eye injuries. I want rather to present this subject to you from the point of view of the general practitioner.

When Dr. Weaver asked me at the meeting of the American Institute of Homœopathy at Rochester to read a paper before this bureau of the State Society, I told him I would write a paper that would appeal to the general practitioner, rather than to the specialist. I have endeavored to fulfill my promise to him as much as possible.

In these days of industrial activity, the general practitioner necessarily is frequently the first to see cases of injury to the eye. In fact, he must give them at least first aid and as so much depends on the ounce of prevention in order that the pound of cure will follow as a natural sequence, I selected this subject as one that must be of more than passing interest to the members of this society.

Our recent compensation laws also add to the importance

of this subject, both from the standpoint of the doctor and patient. Eye injuries may be divided into three different groups, viz.:

1. Superficial injuries of which you doubtless have a great many to treat. Injuries where the violence is slight and the lesions are on the surface of the eye.

2. Contusions. The eye having been struck by some blunt object.

3. Perforating wounds, where the capsule of the eyeball has been penetrated by some sharp object.

Superficial injuries may be subdivided into foreign bodies in the conjunctival sac and on the cornea; non-perforating injuries and erosions; and lastly, burns.

Doubtless everyone present has had the misfortune at some time to have a grain of sand, a cinder, or a small insect fly into the eye and you know from personal experience the eye immediately becomes painful, sensitive to light, tears flow freely, and the whole eye becomes red and congested. In most of these cases, if the upper lid is everted you will find the offending object resting securely in the sulcus subtarsalis, where it can easily be removed, the patient having instant relief.

If allowed to remain for any length of time, however, the scratching sensation still persists even after its removal, and the patient insists there is still something in the eye. This is due to the roughening of the conjunctiva of the lid, and the scratching of the surface of the cornea. This usually disappears in a short time, however, after the removal of the foreign body and the irritation produced by its presence has somewhat subsided.

Notwithstanding this class of cases are quite common, yet the average physician, as a rule, does not have many of them to treat, for every community, especially where we have large industrial establishments, has one or more employees who has made a local reputation by his dexterity in removing foreign bodies from the eye; and you know we have that old household remedy so often resorted to by the laity (I am sorry to say I know of its being used at least by two physicians), I refer to the practice of putting whole flax seed into the eye in the hope that the lachrymation produced will wash the foreign body out of the eye. In the same class is the physician who advocates the internal administration of aconite to remove a foreign body from the eye, instead of removing it as soon as its presence is noted.

An injury that I have met several times, and one that is not uncommon among farmers, is that produced by the entrance into the eye of a beard of grain, usually wheat. This injury is frequently overlooked because the foreign body becomes fixed on the tissues of the upper transition fold and becomes enveloped in mucous so that on a superficial examination of the eye it is frequently overlooked and the physician may declare there is nothing in the eye. Yet, on careful examination, the trained observer will see at a glance from the erosions of the cornea, that a foreign body must be present and upon everting the lid, readily discovers and removes the offending object.

A very common injury and one that is met quite often in manufacturing or industrial centers where men are laboring in stone-quarries, or working for the railroads, as car repairmen, and mechanics of various kinds, where men work at machines, or on modern steel cars where riveting is done with modern compressed air machines, and where men sharpen their tools on emery wheels, small particles of emery, steel, or scales are frequently driven into the eye with sufficient force to imbed themselves in the cornea, and require considerable force to remove them. These do not always cause trouble at once. In fact they frequently are in the eye for several days before the patient calls at the office. It frequently happens that the patient does not notice them when they enter the eye, and only is conscious of their presence after retiring. The upper lid rubbing over the foreign body causing a scratching sensation, and inability to sleep until the offending object has been removed. I have often wondered we do not see more cases of infection in these cases, for, in my own experience, it has been almost a daily occurrence to have patients come to me with foreign bodies in the cornea, after some local celebrity about the railroad office, or a fellow workman has rubbed the protective epithelium off a considerable portion of the cornea in a vain effort to remove it with an old dirty pocket handkerchief on the end of a toothpick, or a match.

Is it not a wonder that we do not have more frequent infections from this source? Of course, the only remedy is to remove the offending substance, after first instilling cocaine. Right here I want to make a plea for careful removal.

Do not destroy more of the corneal epithelium than is absolutely necessary. I frequently find cases where quite extensive areas of the cornea surrounding the foreign body have been denuded of corneal epithelium in a vain effort to remove the offending object, thus causing a permanent reduction of visual acuity, if the foreign body is imbedded in the pupillary area; also, giving a greater surface for the invasion of infectious bacteria and consequent infection of the cornea with the development of that worst of corneal infections the dread of every ophthalmologist, the serpiginous ulcer, where an eye is practically destroyed in a night. In removing steel and iron I am always careful to scrape away the little brown ring of hydrated oxide of iron that remains after the removal of any body containing iron. You will find if you carefully remove the iron rust, as it were, that surrounds the object, the after effects of the injury will be much less and the wound will heal much more promptly.

We also have non-perforating wounds and erosions of the cornea. Flying objects do not always penetrate or imbed themselves in the cornea. Either from the fact that they are too large, or they strike the corneal surface at such an angle that they glance off from its surface, and leave an erosion in the form of a scratch, or cut at the point of contact, which is plainly visible on careful inspection with a good light. These erosions may also be caused from a scratch from a finger nail, or a flying twig.

These eyes, after a few hours, are usually markedly irritated, sensitive to light, have a ciliary injection most marked according to location of the erosion on the cornea. In fact, all the symptoms of a beginning ulcer of the cornea which they really are if infected and should be treated as such if infected. These cases, as a rule, are clamorous for relief, and insist there must be something in the eye. In some of these cases it is necessary to actually scrape away the edges of the wound which have become necrotic from infection, or touch them with some marked antiseptic or stimulant. I prefer pure tincture of iodine, applying it on a cotton probe, being careful to not touch any of the surrounding cornea. You will find these cases are more comfortable and recover much more quickly if a protective bandage is applied for a few days. This is especially true if there is much loss of corneal epithelium. Before applying the bandage in these cases, some

antiseptic ointment as sublimated vaseline, or formaline should be instilled in the eye.

Remember that cases of extensive erosions are prone to recur weeks, or even months after the wound has apparently healed. The recurrence is due to the fact that after the first erosion the epithelium did not become firmly attached to Bowman's membrane and slight causes are liable to elevate it in the form of a bleb. This may recur many times. It is more apt to occur in the morning on awakening when the corneal epithelium adheres to the conjunctiva of the lids and is torn away.

Still another superficial injury to the cornea is that produced by burns. Possibly the most frequent of these is burns from lime. In these cases the lids should be everted and all particles of lime carefully removed at once, the eye carefully washed out with saline solution, boracic acid ointment instilled hourly and a protective bandage applied. Be careful in giving a prognosis in burns of the eye from lime for frequently months afterwards you will find these cases undergo a calcareous degeneration of the cornea. The cornea being gradually invaded with calcareous deposits which encroach on the pupillary area and cause a marked loss of vision.

Burns are also produced by caustic acids and alkalies, molten metals and hot instruments. Burns with curling irons being quite common among women.

One of the things to be guarded against in burns of the eye is the so-called symblepharom, or the union of the bulbar and palpebral portion of the conjunctiva, thus causing the lid to adhere to the eyeball, at times even encroaching upon the cornea, and not only interfering with the movement of the eye, but vision as well.

I will speak but briefly of our next class of cases—contusions of the eye, with or without rupture.

Contusions are injuries of the eye produced by a blunt impact where the foreign body does not penetrate the eyeball. The contusion produces mechanical changes in the affected tissues, as laceration displacement of entire parts with relation to each other. The eye being really a shell filled with fluid, when struck by a foreign body, is pressed in and bruised. The force of the impact is transmitted through this fluid to the neighboring parts, causing them to yield and the capsule of the eye is stretched and often torn. Contusions of the

eye may cause rupture of the external capsule, or may not, according to the force of the impact. Of course, contusion of the eye with rupture of its capsule is the more serious of the two.

When the physician meets one of these cases he should apply an aseptic protective dressing and send the patient to the nearest hospital at once. In these cases of contusion without rupture of the capsule, the danger is not so great. Yet a careful examination should be made at once by some one who is familiar with the use of the ophthalmoscope.

It is not my intention to go into details regarding the changes that take place in the choroid and retina after contusions, nor is it my purpose to discuss the dislocation, or displacement of the lens that frequently follows contusions of the eye, or the laceration of the iris that frequently occurs, as it belongs strictly to the ophthalmologist, and not to the general practitioner. I have seen one instance where the whole iris was torn from its attachment to the ciliary body and was lying in a crumpled heap at the bottom of the anterior chamber. It was caused by a blast in a stone quarry, a piece of stone coming in contact with the cornea with such force as to cause the injury, yet not cause a perforating wound, or rupture of the eyeball. I want to sound a note of warning. Do not be too hasty in giving a prognosis and assuring the patient in cases of contusion, or penetrating wounds of the eye, that vision will not be affected.

Traumatic cataract has been known to develop months, or even years after the injury and is so recognized from a medico-legal standpoint.

A physician has often to decide what part of the responsibility he is able to assume himself, and what he must turn over to the specialist. Let me say even though the physician may decide to turn the injury over to the specialist for treatment, he should still remember his surgical training and that every wound should be rendered as nearly aseptic as possible. He should, therefore, cleanse the vicinity of the eyeball with soap and water and thoroughly wash out the eye with a solution of boracic acid, introduce some antiseptic ointment and apply a protective dressing. If he fails to do this he is not fulfilling his whole duty to the patient.

What are you, as a general practitioner, to do when you see a recent injury to the eye? First, take the history. This

usually gives you the keynote as to what to expect. Then carefully examine the eye and see if the injury is superficial—a contusion, or a perforating wound. The latter, of course, being the more serious. If a perforating wound, and the wound is in the cornea, and the injury recent, the anterior chamber will be either abolished, or shallow. On taking the tension of the eyeball, you will find it low. If the lens or its capsule has been injured, you will find in a few hours the pupillary area will look milky, indicating beginning of traumatic cataract. You may also have prolapse and distortion of the iris, shown by the black-brown mass extruding between the margins of the wound due to the sudden escape of the aqueous humor forcing the iris into the wound. This, as you know, is Nature's method of closing the wound. The wound may be so extensive as to allow the whole interior of the eyeball to escape as the vitreous and even the choroid may prolapse. As I said before, the fate of the injured eye depends on whether the wound is, or will become infected. Primary infection cannot always be prevented; for in many cases the foreign body causing the injury is loaded with infective germs. Yet it is the duty of the physician to immediately make every effort to prevent infection. If due to a foreign body imbedded in the cornea, it should be removed under antiseptic precautions at once, being careful to destroy as little of the corneal epithelium as possible. If due to an erosion of the cornea, treat the wound antiseptically by using some antiseptic ointment, or lotion. If already infected, he should endeavor to overcome by applying some cauterizing agent to the wound, as carbolic acid, or iodine. It may even be necessary to use the actual cautery.

If the wound is not infected, do not forget that ice applied as ice water in the form of cotton compresses, is one of the best agents to prevent infection at our command. I have seen a number of cases of very severe injury to the eye that I feel sure have been prevented from becoming infected by the early and persistent use of ice in this manner. Where any other part of the body is injured, the most natural thing in the world is to use a protective bandage. Yet it is remarkable how often physicians forget the protective bandage in cases of eye injury. By all means after you have carefully cleansed the region about the eye, and washed the eye out carefully with some antiseptic agent, apply a protective ban-

dage. It may either be in the form of a roller cover of the eye, or may only be the ordinary antiseptic gauze bound down, or held in place by strips of adhesive plaster. The bandage not only acts as a protection against infection from without in these cases, but you will be surprised at the relief experienced in all cases of injury to the eye by its use. When properly applied, it not only keeps the lids from continually rubbing over the wound and irritating it in consequence, but it also aids in the re-establishment of the destroyed corneal epithelium.

Do not allow yourself to be lulled into a false sense of security in these cases by the fact that you see many cases of superficial injuries of the eye where, as I said before, some fellow workman has been endeavoring to remove a foreign body from the cornea under the worst conditions possible, and no ill effects follow. If you do, some day you will be surprised and chagrined to see an eye that has simply disappeared, as it were, over night. One such experience will last you a lifetime. Let me say with all the emphasis at my command, *treat every case of eye injury as if you were looking for eye infection. Use the same antiseptic precautions in treating injuries of the eye you would in treating wounds in any other part of the body. Be even doubly careful, if such a thing is possible. The loss of an eye is certainly the worst calamity that can befall a patient and can only be exceeded by the loss of both eyes. Therefore, use every precaution and sterilize every instrument you use in the eye and keep the eye in as sterile a condition as possible after injuries.*

In closing I want to impress upon you the importance of taking a careful and accurate record of all eye injuries. This is of special importance on account of our present compensation laws, as the question of compensation comes up in nearly every case. In justice to yourself, as well as your duty to the patient, you should take and keep a careful record of your examination of the patient when first seen, and your entire course of treatment following. If you fail to do so and are called before a referee, or a jury in court, you may be placed in a very humiliating, as well as embarrassing position, and made to look foolish in the eyes of the public.

Therefore, it is a duty you owe yourself, as well as your patient, to be able to give an accurate account of the condi-

tion of the eye when first seen and the treatment used following the injury.

DISCUSSION ON DR. STITZEL'S PAPER.

DR. I. D. METZGER, Pittsburgh: I want to congratulate Dr. Stitzel on his sensible paper. After all, in eye troubles, as well as others, prophylaxis means a great deal. You may not see many cases of ulceration; but after you have seen one, especially one of a serpigenous nature, you will wish that you had not seen any eye case at all.

I want to emphasize somewhat the matter of care in removing foreign bodies from the cornea; and, in connection with that, the use of cocaine. The eye is exceedingly sensitive, as you know. If you insert a drop of cocaine—at least, if you repeat this in a few minutes—you have taken away that sensibility of the organ; and you can then do almost anything with the eye. Repeat this a few times, and while you can do almost anything with the eye, you must remember that you have taken away the signals of danger and may erode the cornea without knowing it. Cocaine should never be used as a medium for treatment. Take a case with great pain in the eye following, say, the removal of a foreign body. Never prescribe cocaine or give it to the patient to instil into the eye. You do an endless amount of damage by doing so. It softens the epithelium, which may break down under the bandage; and you have all sorts of trouble following. We have other drops that are much better than cocaine for permanent treatment. Many cases of infection come from the fact that the upper lid has been turned back by someone with dirty fingers. Then the foreign body is removed from the cornea, and this infection, implanted on the lid, is carried down into the cornea. The conjunctival tract, while you find all sorts of bacteria in it, usually does not carry with it a serious form of pathogenic micro-organism. Therefore, if left to itself, there is no such great danger of infection as when other bacteria are carried to it. Any erosion of the cornea will be eased up by the bandage. Take a case of a foreign body in the palpebral fissure between the lids. It may not show signs of irritation until during the night. The patient comes to you in the morning and says, "I must have something in my eye. I did not notice it last night before going to bed, but I have not been able to sleep on account of it." The reason it was not noticed the day before is that the foreign body did not come in contact with the eye until the eyes were closed at night. Then the lid began to irritate

the eye. If the foreign body is in the palpebral fissure, if you do not remove it, nature will remove it by festering; just as a fester forms on the finger, it does in the eye. Any foreign body that is not removed will, in due time, cause ulceration. This often tells us the nature of the injury.

So far as contusions of the eye are concerned, another matter that might be mentioned is the fact that we often have detachment of the retina causing immediate blindness in certain areas, if not in the entire eye.

DR. HORACE B. WARE, Scranton: There is one thing that I can heartily second—what Dr. Metzger said about the application of cocaine. I have had patients come to me who had been treated by the family doctor following the getting of some particle in the eye and have found ulceration of the cornea, which means a scar. The cornea is sparsely supplied with blood vessels, and it takes a long time to have a slough; so you are bound to have a scar. Doctors should bear this in mind. They have to relieve the patient, and they think that cocaine will relieve him. There are other ways of giving relief. I make it a rule to tell the patient never to apply heat to the eye under any consideration. It dilates the blood vessels. I apply cold. It will not give immediate relief, but it will give more permanent relief than heat. A good way to apply ice or cold to the eye is by taking a block of ice and laying on it four or five pledgets of cotton that have been previously dipped into boric solution and squeezed out. Apply these pledgets of cotton to the eye successively, putting each one back on the ice after removing it from the eye. You get dry cold to the eye in that way, which gives relief much more quickly than heat.

About the other conditions of the eye. I had a patient sent to me yesterday by a doctor, who said that he had been treating this patient for arthritis. The man had been having much trouble with his joints, and had developed trouble with the eye. I found a sclerocorneal inflammation all around the zone. There is always some inflammation in the deeper structures of the eye when you get that. The man had a chronic iritis. I used a mydriatic. There was a stellate iris, with adhesions all around. He has that stellate eye that you have seen pictures of. If the doctors would teach their patients to keep away from fakers and go to men who know about the eye, they would save them from future trouble. The patients think that they can go to an optician and get glasses. Very often they can, but an error of refraction is not always the cause of failing vision, and the optician is not capable of mak-

ing the diagnosis in certain eye conditions. He should not have a right to tamper with the eye.

DR. H. W. CHAMPLIN, Towanda: Much has been said about cocaine, all of which is very good and true, I made a memorandum to say a word about it, but it has been said. My method of using it, of late, because it is expensive and the solution deteriorates, is this: In removing a foreign body, I put a tiny cocaine crystal on the end of an applicator, and place it right where it is needed. It dissolves there, and I have anesthetized only that limited area—and very effectually, too. If we do not see a foreign body, we have not done justice to the patient unless we have used a cotton mop and brushed the eye all over thoroughly. We may not be able to see the foreign body. Some cases that I have seen had been infected not only with soiled fingers, but with dirty instruments used by the doctors. They fail to find the foreign body very often because they do not have suitable helpers or suitable illumination. If they want to remove foreign bodies, they must provide themselves with suitable illumination for this purpose.

Something might be said about bandaging the lid closed when there is infection. By doing this, we shut the infection in. I think that drainage is better left to nature, to push out any bacteria. Ingrowing cilia, especially in children, simulate foreign bodies. The patient comes to me, and does not know that the lid is rolled in and the cilia irritating the eye. I put collodion or adhesive plaster on, to keep the lid from irritating the eye. A few weeks ago a man came into the office, a telephone message having preceded him, and I found that his eye was full of tiny worms, just visible to the naked eye. He said that he had felt a peculiar itching sensation, and had looked into the mirror and seen hundreds of little worms there. He came to me, and it took an hour to get all the worms out, they ran across the surface of the eye so rapidly. I could see them only by making the eye dark with argyrol solution. After that experience I expect to find almost anything in the eye. I reported at Rochester a case in which I had found a wad of cotton as large as the end of my finger, which had been pushed into the eye. The doctor said it was a bad case of ophthalmia, and had sent the patient to me. I everted the lid and found a wad of cotton that had been in the child's ear. The child had taken it out of the ear and put it in the eye.

DR. METZGER: In what part of the State did the patient live?

DR. CHAMPLIN: Up around Pittsburgh.

DR. E. A. KRUSEN, Norristown: I should like to ask Dr. Stitzel concerning these cases of foreign bodies, a condition that I frequently come across, what experience he has in the administration of aconite internally after the removal of the foreign body, to reduce the soreness and inflammation in the eye. I almost invariably use it.

DR. STITZEL, closing: To answer Dr. Krusen first, if I have a case come to me in which the substance has been in the eye long enough to produce irritation, I usually touch the eye with some marked antiseptic. If it has been in the eye for several days and the organ is inflamed, I frequently touch it with pure carbolic acid or iodine. We are using this very much in general surgery, and I also use it in infective ulcers of the eye. I do not employ aconite, but I should not be surprised if it would do some good. I remember that when I was going to college, one of our most revered homœopathists recommended the use of aconite for foreign bodies in the eye. Hahnemann was not foolish enough for that. He would remove the foreign body first, and give the aconite afterwards. It is the same about using flaxseed. I knew of two different graduates of Hahnemann Medical College who used that.

Speaking of the action of cocaine, I would say that I never use cocaine after I have removed the foreign body, or give it to the patients. It has a drying effect on the upper layers of the cornea, and you are more likely to have infection.

That is the way I always apply cold—put the little pledget of cotton on a block of ice. I keep the little piece of cotton on ice two minutes, and then take it off the ice and apply it to the eye.

I will cite a case that I had some years ago, in a young lady twenty-one years of age, who came to me one evening. She lived in the country, and they had been threshing. She happened to stand in front of a window near where her brother and some laborers were throwing snowballs. One of the balls broke the window, and the particles of glass entered her eye and made a cut the length of the cornea and two cuts in the iris, about two millimeters back of the sclerocorneal margin, so that you could see little bits of vitreous sticking out. I kept ice on the eye in the way stated. These cuts healed up as well as anything I have ever seen. I never saw an eye heal after extraction of a cataract better. The patient had astigmatism, more or less irregular, from the cut in the cornea; yet she had a vision of 20/20. At a distance, you would not notice it; but on close inspection, you could see the long, irregular cut.

I used ice, to prevent infection in these cases. There is no question that heat will congest the eye and bring the blood to the surface, to act as a medium for the activity of different bacteria.

Talking about educating physicians to the fact that ordinary optometrists or opticians cannot handle eye cases, there are some with otherwise good training who recommend their patients to go to some optician, for some particular reason of their own—it is hard to tell what.

DR. H. W. CHAMPLIN, Towanda: I should like Dr. Stitzel to explain his use of carbolic acid and iodine. A relative in a distant town telephoned me about the use of these in a patient of his. He said that Dr. Stitzel had recommended it. I said, "Do not do that; but send her to a specialist before you use these solutions yourself or treat an ulcer of the eye." If used in fluid form they will flow into the tissues and destroy them.

DR. STITZEL: I use carbolic on little pledgets of cotton, and iodine I use instead of the actual cautery. Sometimes I give an anesthetic and use it. You will be surprised at the good effect of iodine, intelligently applied. I use the pure tincture of iodine, after instilling cocaine, on an ulcer. I simply dip in a little piece of cotton, which will absorb a certain amount, so that you can put it on the ulcer without putting it on any of the surrounding parts. If you cannot do this, do not use it at all. You must know just how to apply it. Hold it on for ten or fifteen seconds, and sometimes a little longer. You will be surprised at the result. You must tell the patient that it will cause pain afterwards, but that it will give the results. Even in a case of serpigenous ulcer I use it. In these cases, you have a broader surface. The ulcer will creep across the cornea over night. Using the iodine prevents the use of the actual cautery. I do not know of anyone who would be foolish enough to drop iodine into the eye. There would not be an eye there very long, if he did.

THERAPEUTIC NIHILISM.

BY

HERBERT T. MOYER, LANSDALE, PA.

THIS is not intended as a scientific discourse, but as a paper on a few practical observations.

Therapeutic nihilism, or skepticism as to the efficacy of drugs and medicines in the cure of the sick, is a condition that has up until this time, been more prevalent among members of the old school than among the homœopathic profession. It would but naturally follow that when a physician displays a growing indifference and lack of confidence in the value of drug medication, that the laity as well, sooner or later, also shares this skepticism. This state of affairs, however, does not stop at this point and here is where the reins are removed from the hands of the physician and the patient acts on his own suggestion, or that of some one else, equally inefficient as a medical adviser, and seeks relief from the many cults or fads, such as Christian Science, pow-wow doctors and the various "pathies" and "practices" that flourish at this time. This holds equally true to "drug store" prescribing. Some of these "practices" may possess certain virtues, but the greater harm being done is that the patient is removed from under the supervision and direction of a capable medical adviser to one who knows far less of diseases, pathology, therapeutics and the other phases of medical study. This is self-evident from the fact that not one of these so-called modern "practices," including osteopathy, chiropractics, etc., spend near as much time in preliminary and general training as does a properly licensed physician. Such a state of affairs is not only a pecuniary loss to the medical fraternity, but it lowers the status of the physician and places him on the same level as that of the practitioner of these "isms" or "pathies."

The question naturally arises as to why such a situation exists, and whether or not there are good and sufficient grounds for this nihilism of drugs?

From a homœopathic point of view, I should say "no." From what I have been able to observe, I have concluded that those members of the allopathic profession who lose faith and confidence in drug medication, do so principally, for two rea-

sons: (1) lack of as definite laws ascertaining the action of drugs and the prescribing of the same; (2) disappointment in the results obtained from the use of these drugs.

We know that in homœopathy we have something definite, something concrete, our prescribing being based on drug provings obtained by the action of drugs on the human body alone. Our laws state definitely just what remedy to choose and it is up to us to know our remedies so that we may be capable of making the right choice.

Disappointment in results obtained from use of certain lines of drug therapy instinctively leads one to seek other means of alleviation of suffering, to find something better to supplant the old. This has led to much so-called scientific prescribing or to the trying out of many apparently brilliant laboratory concoctions which today exist, but tomorrow are forgotten; which today are lauded as most remarkable medical discoveries, yet tomorrow are pushed aside for something new. A good example of such being the "tubercular cure" tried in the New York hospitals a year or more ago, which, through the use of names of men prominent in the medical profession as well as much newspaper publicity enjoyed a short life of fame, but whose real merit was so insignificant that most medical men have since forgotten its name. Notwithstanding this, what homœopathic physician here today has cast aside his belladonna, his bryonia, sulphur or in fact any other homœopathic remedy that he is well versed in and which he may have been using from one to fifty or more years, and which, with no stretch of imagination, he has seen their gentle yet powerful, their insidious yet sure action in many bedside or clinical experiences?

When Potter in his "Materia Medica and Therapeutics" states that the natural law by which the living organism is in itself adequate to the cure of all its curable disorders—when he claims that that law alone "enables the homœopathist to report his sugar cures," I say, he is wrong in his conclusions, and, by his very statement, might just as well have omitted as unnecessary the eight hundred or more pages of his book which deals with materia medica and therapeutics. What is true of any of the above-mentioned homœopathic remedies is equally true of the bulk of our proven drugs.

I recently asked a man whom I had not seen for some time, "Well, are you still practicing homœopathy?" His an-

swer was, "I know nothing better." The point I wish to make is this, if we stick to our profession and study our remedies, therapeutic nihilism will not find us receptive.

The scope of drug action from a therapeutic point of view is so wide that we often marvel. It has been my pleasant experience to recently see improvement resulting in complete recovery in several widely different clinical cases and marked improvement in a third. Such, I say, is the scope of action of homœopathic remedies.

In this particular instance, I am referring to antimony crudum 6x, in the case of incipient typhoid, in one of acute Brights disease and in a case of hemorrhoids.

These diagnoses were essentially made from clinical symptoms and not verified by microscopic tests. While I believe in employing the laboratory whenever advisable or possible, and at times laboratory diagnoses seem marvelous, yet at other times even such are to be doubted, for so-called science is occasionally fickle. We labor under certain premises for years which we recognize as fundamental till other and more definite facts are discovered. It is far from my intention to minimize the value of the laboratory, nor of scientific research, but I do wish to defend the clinical bedside diagnoses, for it is by the close study of clinical manifestations of disease that the average practitioner is dependent for his diagnoses and for his prescription, and here let me state that there are many of the older homœopathic physicians who by years of close and conscientious study, have seemed to develop most accurate and intuitive knowledge along the lines of diagnosis and prognosis.

The case of incipient typhoid previously referred to was substantially as follows: Male, married, about thirty-four years of age, who consulted me complaining of the following history and symptoms: For a period of two weeks had suffered occasional supraorbital headaches and during the past three days general aching, at the same time growing tired and weak. Appetite failing for past ten days with a tendency to constipation while his natural habit in this respect was two to three normal movements daily. Now drowsy, spleen slightly enlarged, urine scantier than usual, temperature 100.7 degrees and a pulse of 84.

Bryonia IX was prescribed and on the following day at 5.45 P. M. found no improvement, temperature 101 degrees,

pulse 84, frontal headache, weak, drowsy, gaping, tongue very white with belching of gas. Antimony crud. 6x was prescribed and on the next day found his temperature at 11 A. M. 97 degrees, and pulse 60. Again on the day following my visit found the patient's temperature now 98.5 degrees, with a pulse of 60, tongue cleaning off and general improvement. Two days later found temperature 98.4 degrees, pulse 72, two natural bowel movements and general improvement further continued.

The second case was one of acute Bright's disease which seemed to follow an attack of la grippe. The patient was a little girl of about three years whose main mental symptom was that she did not wish to be disturbed, the mind seemed clouded, child was drowsy and inclined to be irritable, pale face, urine scanty and albumen plentiful, painful on voiding.

The case terminated in complete recovery under strict homœopathic treatment in which antimony crud. played a big part in clearing up the mental condition of the little patient.

The third case was one of catarrhal proctitis and hemorrhoids in which the patient complained of a stool comprised of hard lumps and mucous, oozing of mucous from anus and hemorrhoids. This case was likewise benefited by antimony crud.

These cases are not cited as remarkable cures or improvement of the condition **just mentioned** but as an example of the breadth of therapeutic action of homœopathic remedies.

The object of this paper is to reestablish, if possible, a deeper interest and assurance in the therapeutic value of homœopathic remedies, by which we may help to quell this growing nihilism.

THE USE OF THE REPERTORY—CONSIDERING PATHOLOGY.

BY

J. LEWIS VAN TINE, M.D.

(Read before the Homœopathic Medical Society of Philadelphia County.)

PATHOLOGY has been called the physiology of disease. In studying a diseased condition, we must note all changes from normal anatomy as seen by the naked eye; all departures from normal histology as revealed by the microscope; and, finally, we must seek the causes which produced the departure from normal structures and functions, together with the nature and sequence of the disturbances which they produce.

We cannot over-estimate the value of the work that the pathologist has done to give us a clearer understanding of the etiology and various morbid changes in many diseases which heretofore were improperly classified. Every year, valuable observations are made which still further clarify our knowledge and understanding of human ills, thereby aiding in our diagnoses.

The importance of diagnosis is apparent to all of us. Some have accused the homœopathic physician of disregarding the necessity of making an accurate diagnosis before attempting to treat the disease, but our first duty is to recognize the disease in question and then search diligently for the remedy indicated by the totality of the symptoms. Hahnemann certainly must have recognized the necessity of diagnosis, and he expresses his belief in pathology in par. 29 of the *Organon* as follows: "We have seen that every disease (not subject to surgery alone) is based upon some particular morbid derangement in the feelings and functions of the vital force." Also in par. 5 he directs us to inquire into the etiology of disease when he says: "The physician in curing derives assistance from the knowledge of facts concerning the most *probable cause* of acute disease, as well as from the most significant points in the entire history of a case of chronic disease; aided by such knowledge, he is enabled to discover the *primary cause* of the latter, dependent mostly upon a chronic miasm."

Every pathological condition has a certain train of symptoms, but they are not identical in each case, there is a vari-

ation in some particular (whether it may be due to psora, idiosyncrasy or what, we know not), which gives the case an individuality. It is for this very reason that we cannot prescribe the homœopathic remedy on pathological conditions alone, but must look for something characteristic, something peculiar, to help us to individualize and isolate a given case of a named disease from all other cases of that disease in order to find the indicated homœopathic remedy for that particular case. We can interpret as a warning against prescribing for pathological conditions alone, that part of section 'I of par. 70 of the Organon where Hahnemann says: "Every fictitious or obscure, internal cause or condition, or imaginary, material, morbid matter are not objects of treatment." In the latter part of par. 5 he says: "In connection with this, the bodily constitution of a patient (particularly if he has a chronic disease), the character of his mind and temperament, his occupation, his mode of living and habits, his social and domestic relations, his age and sex functions, etc., are to be taken into consideration." Par. 18: "It is then unquestionably true that, besides the totality of symptoms, it is impossible to discover any other manifestations by which diseases could express their need of relief. Hence it undeniably follows that the totality of symptoms observed in each individual case of disease, can be the *only indication* to guide us in the selection of a remedy."

After making a complete record of the patient's symptoms, there is no other certain way of arriving at the similimum but by the use of the repertory, which is strictly an index of our materia medica. Almost all who make repertorial studies of their cases use the Kent repertory, which is the most complete work that we have at present. One should not become discouraged on attempting to use the repertory, because it is just like any other work of reference and requires study to learn how to use it. No man can get the most out of a new machine until he has made a careful study of the same and has learned how to develop its greatest power. So it is with the repertory of the homœopathic materia medica, it is necessary to study the arrangement of the rubrics and find how the symptoms are recorded under them. Gradually, one becomes more and more familiar with his repertory and it becomes a comparatively easy matter to refer to the remedies under some peculiar symptom.

In using the Kent repertory we consider three grades of symptoms—general, particular and common. The symptoms which have the highest value in prescribing, are those which relate to the innermost of man—his general symptoms. To these generals we can prefix the personal pronoun “I,” as “I am irritable,” “I am restless,” “I am cold.” A general may relate to the mentals, including the will (with its loves, hates and fears); the understanding (with delusions, hallucinations and delirium); and the memory. The generals also include sexual perversions; desires and aversions for food; appetite; thirst; relation and reaction to environment, as time, heat and cold, dry and damp; menstrual aggravation and amelioration; position; pressure; motion; food aggravation. The color and character of discharges from various parts of the body should also be classified as general. A general symptom may be peculiar, the more peculiar it is, the nearer it relates to the innermost of man and the higher its value in prescribing.

A particular symptom is one that relates to a part of the body—the head, the heart, the lungs, the stomach, etc. If we examine the liver symptoms alone, we are examining particulars. If we are examining eye symptoms alone, we are examining particulars. Sometimes we find the same symptom running through all the particulars, this symptom then becomes general as well as particular. As an illustration, consider arsenicum album. There is coryza which is burning and excoriating. There is gastric irritability with marked burning sensation. There is watery diarrhœa with burning sensation in the abdomen and burning and excoriation of the anus. There is burning along the urethra while voiding urine. In examining each part separately we are examining particulars, but running all through the particulars there are burning sensations, therefore burning, which was particular, becomes a general and a keynote or characteristic of the remedy.

Common symptoms are those which are common or natural to the disease and are of very little value in prescribing.

It has been proposed to make pathological provings of remedies on animals, resorting to all known laboratory methods to ascertain the effects of the drugs on the various organs and tissues. The value of all this work to the homœopathic prescriber is extremely doubtful. Suppose the experimenters should develop in the intestines of their subjects, ulceration of Peyer's glands such as we find in typhoid fever, how can they

demonstrate to us which remedy to use by displaying to us a greater or lesser degree of inflammation and ulceration produced by the administration of different drugs? Since science has been unable to provide us with means to inspect such lesions in patients whom we wish to cure, we shall probably continue to prescribe symptomatically for some time to come. Suppose we were enabled to inspect this lesion of typhoid fever, can anyone imagine how that could aid us in determining whether we should use baptisia, hyoscyamus, phosphoric acid or rhus tox.?

We are often guided to consider certain remedies by the appearance of the part, for example in diphtheria, the purplish color of the throat and the involvement of the left side; but if the generals (hyperesthesia of the throat externally, and sleeping into an aggravation) did not correspond, the remedy, lachesis, would have been incorrectly selected. If we examine a case of tonsilitis of the follicular variety, is there anything about the local appearance which would aid in determining whether to give mercurius biniod, or phytolacca? The indications for the use of these two remedies are so distinctly different, that the discriminating homœopath would not misapply them although the appearance of the tonsils is practically the same in both.

We might continue to present other similar illustrations to demonstrate our claim that symptomatology is paramount to pathology in selecting the homœopathic remedy. Hahnemann has laid down rules for the successful application of our remedies, if we follow the Organon, we cannot make the error of basing our prescriptions on pathological conditions, rather than on the symptoms presented by the patient.

COLOR FIXATION OF TISSUES PRIOR TO MECHANICAL DISINFECTION.—LeGrand has carried into effect Delbet's idea of chemically fixing necrosed tissues along the trajectory of wounds before mechanical disinfection. LeGrand added the coloration of the tissues, using a 10 per cent. solution of methylene blue in 40 per cent. formal. The tissues become deeply colored in accordance with their healthy condition and the tint attained is the index of their condition. Necrosed tissue becomes strongly and deeply tinted, almost black. This test is of great value in determining what tissues ought to be resected. Besides, the mixture is bactericidal.—*Abstr. Surg. Gyn. and Obs.*, Vol. xxv, 417.

A PAIR OF ARTERY FORCEPS IN THE INTESTINAL TRACT FOR FOUR YEARS.

BY

HERBERT L. NORTHROP, M.D.

MRS. E. R., age 36, presented herself to Dr. W. Nelson Hammond in May, 1917, complaining of pelvic discomfort. She gave a history of having had two operations performed in England, in 1908 and 1913, for the removal of a pelvic tumor and for oöphorectomy. She is constipated and bowel movements are very painful; she has seen blood in her stools. By external examination a nodular, movable tumor was felt in the lower abdomen to the right of the median line. Vaginal examination revealed the presence, in the upper part of the rectum, of a pointed, metallic object—presumably a pair of forceps. X-ray examination disclosed a pair of artery forceps within the pelvis, slightly to the right of the median line, the rings, or handle, being directed upward and the point, or jaws, being directed downward. We did not tell this lady of our discovery.

This patient promptly consented to operation and at Dr. Hammond's request I opened the abdomen. I found the two rings of the forceps were contained within the lumen of the sigmoid colon, while one ring was situated in the cavity of the cæcum, and the other projected through the ileocaecal valve into the ileum. It was now evident that a short circuiting anastomosis had been performed between the cæcum and sigmoid when she was operated upon in England, for here were the blades of the forceps projecting through the anastomotic opening. When I opened the cæcum anteriorly the forceps were seen surrounded by a considerable quantity of hard, fecal matter. The instrument, which is herewith illustrated, is much corroded. I then closed the opening in the cæcum with Lembert and Cushing sutures of linen. This patient's recovery was rapid and complete; she does not know to this day that we found and removed a pair of artery forceps from her pelvis. Such knowledge belongs strictly to the surgeon and should be regarded as a professional secret.



FIG. 1



FIG. 2

THE TEXT EXPLAINS THE ABOVE FIGURES

CAN MATERIA MEDICA BE MADE A BASIS OF A SCIENTIFIC PATHOLOGY?

BY

W. FRANKLIN BAKER, A.M., M.D., PHILADELPHIA.

THE time has come when we are beginning to think about wounds and disease in this country as never before, and the future of homœopathy lies in its proper constructive development toward that responsibility. One phase of this question I hope to discuss with you, namely, "The Relationship of Pathology to Our Materia Medica." Much stress has been laid on surgery during the war, but a review of the actual figures will show that in the Mexican War six men died for every one that was killed; in the Crimean War ten men died for every one that was killed; in the Civil War two men died for every one that was killed; and in the Franco-Prussian War twelve men died for every one that was killed.

It looks as though modern pathology has not kept its pace, for in the earlier wars where there was a stronger body of men physically the death rate was low.

In the present war the physical condition and an analytic examination of the men along pathological lines has weeded out many undesirables, but finally we came to what was taught by Hahnemann, namely, a thorough analysis of mental symptomatology. In one instance alone 700 men were dropped from an ambulance company because of mental analysis, almost precisely as laid down by Hahnemann in his *Organon* excluded them as unfit for warfare. Therefore it may be argued that modern medical methods demand, as being standard for best work, a combination of the pathological and the psychological. By far the greatest amount of endowment in late years for study has gone for psychological research.

As one reviews the contact and impressions which homœopathy has made on medical studies, there are several factors that are significant.

First, there is a pathological significance to our symptomatology. This is what our laboratories have insisted upon within recent years. If the introduction of industrial medicine into the collegiate courses has rendered to homœopathy

no other service it has standardized our symptomatology with pathological findings.

Secondly, the large endowments in medical education in spirit favor our symptomatology because of the psychic analysis. This subject in its relationship to medicine was introduced by Samuel Hahnemann and is now being taught in our special research schools as modern psychology, so that homœopathic physicians should feel that these heavy endowments are really fostering their method of the study of mental analysis, thus rendering more valuable the nervous and mental symptomatology of our *materia medica*.

As homœopathic physicians it is our duty to study pathology from the standpoint of our homœopathic remedies where it is possible so to do. Where it is possible to do this a better impression is made upon the mind of the student and the work thus checked against can be well proven. For as Blackwood puts it, "There are more mistakes with the prescriptions than there are with the remedies, hence failure." Here in this statement is the first pathological caution for *materia medica*. He further defines the relationship of a basal pathology when he says: "Patients of a highly developed nervous system on whom medicines act quickly should have the lower potencies, whereas a patient of sluggish temperament that needs arousing should have the higher." This places the burden of the deeper action of our remedies directly on our pathology, and it insists upon a careful revision of our pathological teachings to corroborate the lectures of the professor of *materia medica*.

He further bases his prescription on the pathological when he says, "Where a remedy is indicated and fails to modify the symptoms, the potency should be changed, and not the remedy. If the remedy ceases to act after beginning a favorable action, then again change the remedy. Where maximum doses are used it will prevent an overdose by modification of the potencies." According to these statements it is fair to suggest that the maximum doses bring about certain pathological changes which alter the symptomatology, and a careful study of the cases in this particular will give a definite pathology. This is evidenced time and again in the industrial diseases which only recently have received the attention which should have been given them years ago, and that according to the rule laid down by Hahnemann. But,

like many of his other sayings, they are taken by some only as a means to an end, which is not in accord with the thorough understanding of the action of remedies. It is further unfair, and simply assertive to say that potencies of remedies do not have a pathology. Statements such as these are made for effect only, and are without the foundation of facts such as are observed by a clinician of any great experience. To neglect their study because of an assertion of this kind is only cutting one view to a dogma unsupported by research. How much more impressive would the teaching of our materia medica be if augmented by a well-defined pathology. This can be done in the majority of drugs by the unintentional provings. At least it can be proven to the most skeptical that a basal course in pathology, certainly equal to any other course, can be built up on our drug pathology instead of teaching the subject as a concrete and separate study. This seems to me to be the realm of the homœopathic college. As further proof of this statement we find that in all mergers of largely endowed and State institutions of the dominant school with our own, this has been attempted, and is surely a notable tribute to our drug philosophy.

A repeated study of drug pathology would also lead us to a finer discrimination in observation, thus leading to an accurate diagnosis which has as its finality positive therapy. As can be seen, therefore, doubt would be eliminated, and one would be given an ideal therapy. This, of course, would be very difficult to carry out, but after several years in study of industrial pathology I have no hesitation in saying that it can be done. A complete study of the grinders of drugs will help, but a finality of action cannot always be obtained, except perhaps by further work, and here pathology in the abstract could be supplemented. This method would add to the student's belief in his materia medica, for as it is he receives an accurate eye concept of the gross and finer pathology, but the logical reasoning to a therapy is missing, because while we know by what rule the case died, we have no light on the possible recovery of the next, hence, nihilism in therapy.

Again, it is psychologically impossible for the student to take in an abstract heterogeneous concept and retain it without analogous reasoning to fix that concept, hence the combination, in the older days under Farrington, Raue and Hering, where practice and pathology and materia medica were associ-

ated. This undoubtedly yielded better homœopathic students than the system of the present day. Our present students, however, obtain the advantages of "cultural medicine," but cultural medicine has gone us one better by adding our course to their own, laying great stress on pathology of remedies. Under this tutorage in the Collegiate Health Census we find 49 per cent. of those students of the great universities preferring homœopathy when they are sick. This likewise is a tribute to homœopathic philosophy gained in the last few years.

Therefore, for the better study of *materia medica* it is necessary to combine a pathology which supports drug action. The proof of the validity of this course lies in the fact that it has been selected by so large a class of college clientele coming presumably from the best families in the land.

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF PUBLIC INSTRUCTION
BUREAU OF MEDICAL EDUCATION AND LICENSURE.**

Philadelphia, January 19, 1918.

HAHNEMANNIAN MONTHLY:

Dear Sir—The results obtained in the campaign amongst the hospitals of Pennsylvania for admission of venereal diseases, the outline of which you published in your January issue, are as follows:

| | |
|---|-----|
| Total number of hospitals communicated with..... | 186 |
| Total number of hospitals heard from and acquiescing in the request | 156 |
| Number of hospitals not heard from | 30 |
| Number of hospitals declining to acquiesce | 1 |
| Number of hospitals in the State approved for internship communicated with | 80 |

Most of the hospitals not heard from are small institutions of 50 beds or less, located in country towns scattered over the State.

The one hospital declining to acquiesce is:

Titusville Hospital, Titusville, Pa.

It will be seen from these results that Pennsylvania is now in line with the best thought on the subject of control of venereal diseases. The boards of managers of the hospitals

of the State have arisen magnificently to the occasion. We would emphasize the responsibility which now rests with the medical profession as a whole in their several communities, especially those attached to the various hospitals as staff members. The bureau would ask that every medical man sees to it that his hospital organizes and does effective work, both in their out-patient department and in their house service. The slogan should be "strike while the iron is hot." At no time and in no State has such an opportunity been given medical men to deal effectively with the venereal menace. Now that the bureau has secured the acquiescence of the management of the various hospitals, if in any given hospital the matter be incompletely or slovenly administered, the blame must rest distinctly with the medical men on the staff and the reproach will be theirs to bear.

At a future reinspection of the various hospitals the administration of this matter will be carefully studied in each institution and where the service is found to be inefficient, the bureau does not propose to stand on any ceremony or to spare any medical staff which is found to be derelict in proper organization and administration of this department. Any lack of interest or inefficiency of result will be brought pointedly to the attention of the Board of Managers of that institution in which it is found to occur, irrespective of what the result may be to the medical men responsible. Medical men are strongly urged to take this matter of organization up in staff meeting and promptly to get into consultation with their Board of Managers.

Let the medical profession of Pennsylvania now demonstrate to the public their measure of responsibility.

Very truly yours,

J. M. BALDY,

President of the Bureau of Medical Education and Licensure.

AVOID THE SPREAD OF COLDS.—It is an obligation on the part of persons having colds to see to it that they do not spread these colds to somebody else, asserts Rucker of the *Pacific Med. Jour.* (Oct., 1917). The person who neglects to cover his nose and mouth when he sneezes and coughs, the careless spitter, the person who permits his germ-laden discharges to contaminate things which are going to be handled by other people is a menace to the community. If such a person uses public swimming pools, if he is not amenable to reason and persists in distributing his infection, he should be avoided as a spreader of pestilence.

BUSINESS TRANSACTIONS
OF THE
**Fifty-Fourth Annual Session of the Homoeopathic
Medical Society of the State of
Pennsylvania**

September 18th, 19th, 20th, 1917

FIRST SESSION.

TUESDAY MORNING, SEPTEMBER 18, 1917.

The meeting was called to order by the President, Dr. Edward A. Krusen, of Norristown, at 10 o'clock. Rev. W. L. Sawtell, D.D., pastor of the First Presbyterian Church of Scranton, delivered the invocation.

Dr. J. L. Peck, of Scranton, Chairman of the Committee of arrangements, made a cordial address of welcome, the response to which was made by Dr. William Hillegas, of Philadelphia, who said the members would know on leaving that they had been staying with their friends.

On motion of Dr. D. C. Kline, of Reading, the program as printed was formally adopted.

Dr. Hillegas, the First Vice-President, then took the chair, while Dr. Krusen delivered the address of the president (printed in full in the *Hahnemannian Monthly*, September, 1917).

Dr. Hillegas appointed the following as members of the Committee on the President's Address, to report at a later session: Dr. William C. Hunsicker, of Philadelphia, Chairman; and Drs. J. L. Peck, of Scranton, and J. M. Heimbach, of Kane.

Dr. I. D. Metzger, of Pittsburgh, the secretary, on being called on for the report of the secretary, stated that this largely consisted of the minutes of the previous meeting, which had been duly recorded in the book provided for that purpose and printed in the *HAHNEMANNIAN MONTHLY*. On motion of Dr. Hunsicker, the reading of the minutes was dispensed with.

Dr. Ella D. Goff, of Pittsburgh, read the report of the treasurer as follows:

TREASURER'S REPORT.

Annual report of Ella D. Goff, M.D., treasurer, for the fiscal year ending September 17, 1917:

DR.

| | | |
|--|------------|------------|
| 1916, Sept. 11, To balance | \$1,548.84 | |
| 1917, Sept. 17, To annual dues collected | 2,025.00 | |
| | <hr/> | \$3,573.84 |

CR.

| | | |
|---|---------|--|
| 1916, Sept. 12. By order No. 183, to Kennedy Printing Co.. | \$27.50 | |
| 12. By order No. 184, Ella D. Goff, Treasurer, postage, printing, traveling | 50.00 | |
| 21. By order No. 185, Irwin D. Metzger, Secretary, printing, postage, traveling | 121.29 | |
| 14. By order No. 186, Mark W. Wilson, publicity... | 93.29 | |
| 1916, Nov. 4. By order No. 187, Lulu Gay, Stenographer | 125.00 | |
| 1917, Jan. 3. By order No. 188, E. A. Krusen, expenses of Legislative Committee. | 25.00 | |
| 31. By order No. 189, Hahnemannian Monthly | 856.00 | |
| 18. By order No. 190, Hahnemannian Monthly for 1,000 reprints of Dr. D. P. Maddux's article | 17.87 | |

| | | |
|--------------------------------------|------------|------------|
| September 17, 1917, by balance | \$2,257.89 | |
| | <hr/> | \$3,573.84 |

Respectfully submitted,

ELLA D. GOFF.

Treasurer.

Dr. Krusen appointed as the Auditing Committee for this report Drs. B. F. Books, of Altoona; C. S. Raue, of Philadelphia; and W. F. Edmundson, of Pittsburgh.

The Report of the Board of Trustees was read by Dr. Hunsicker, as follows:

REPORT OF THE BOARD OF TRUSTEES.

The Board of Trustees of the Homœopathic Medical Society of the State of Pennsylvania have held three extra meetings during the past year. The first was on October 12, 1916. General routine business was transacted, and the place of the next annual meeting of the society considered. The invitation of the Lackawanna County Medical Society to meet at Scranton was read, and a committee appointed to consider said invitation.

At this meeting of the Board Dr. Heimbach resigned as president and turned over the office to his successor, Dr. E. A. Krusen, of Norristown, who accepted the same. Dr. William C. Hunsicker was re-elected Secretary of the Board of Trustees.

The second meeting was on January 8, 1917. The usual routine business was conducted. The committee appointed to consider the invitation of the Lackawanna Medical Society reported favorably, with the suggestion that the date of the meeting be September 18th, 19th and 20th, and with the understanding that the same arrangements regarding exhibits and entertainment as when the trustees accepted the invitation of the Berks County Medical Society hold good.

The question of calling a special meeting of the society in the spring to discuss the question of federation, as suggested by the American Institute of Homœopathy, was taken up, and it was the consensus of opinion of the trustees that it would not be possible to hold the said meeting.

The third meeting of the Board was held June 14, 1917. The usual routine business was transacted. Dr. T. G. Robinson, Secretary of the Lackawanna County Medical Society, formally acknowledged the acceptance by the Board of Trustees of the invitation to meet at Scranton, September 18th to 20th.

The HAHNEMANNIAN MONTHLY, through Dr. Hillegas, asked the State Society to help carry the burden of publishing the journal caused by the extraordinary condition of the paper and printing market now existing. On motion, the trustees recommended to the State Society that the HAHNEMANNIAN

MONTHLY receive fifty cents additional for each member who had paid dues for the preceding year, until such time as the present high cost of material and labor should be relieved.

The question of federation was then discussed, and the secretary was directed to send a letter to the chairman of the Committee on Federation of the American Institute of Homœopathy, stating that the trustees of the Homœopathic Medical Society of the State of Pennsylvania would recommend, at the annual meeting of the society in September, the adoption of the preamble and resolutions suggested by the Executive Committee of the American Institute of Homœopathy, with the following change of phraseology: "It shall be *expected*" instead of "required," as now incorporated in the paragraph; so that it shall read: "Be it further resolved, That hereafter any person becoming a member of the Homœopathic Medical Society of the State of Pennsylvania shall be expected and urged also to become a member of the American Institute of Homœopathy," etc.

The annual meeting of the Board of Trustees was held at the Hotel Casey, Scranton, September 17, 1917. The usual routine business was transacted. The question of taking steps to secure greater publicity in regard to the affairs of the society was brought up by Dr. Bernstein, who introduced Mr. Mark Wilson, press representative of the Bureau of Sanitary Science. This gentleman explained the work necessary to bring medical matters before the public.

Dr. Krusen reported that, at the request of the American Institute of Homœopathy, a meeting of the Pennsylvania Homœopathic Medical Society had been held at the Bellevue-Stratford Hotel, Philadelphia, on August 10th, to discuss the matter of enlistment in the Medical Reserve Corps of the United States Army, addresses having been made by prominent officers of the above-mentioned organization.

Reports of standing committees being now in order, Dr. Metzger, as Chairman of the Committee on Organization, Registration and Statistics, said that his principal duty in that capacity was to secure statistics concerning hospitals and medical societies. He had been rather successful in securing this data, which he had with him and would turn over to the HAHNEMANNIAN MONTHLY to be printed later. He deprecated the tendency that was still apparent to ignore communications from the secretary of the State Society, which had handicapped him very much. This matter should be corrected, or nothing could be done to secure integration.

Dr. Metzger then read the names of the various organizations from which he had secured data.

The report was accepted and ordered printed in the transactions in full.

Dr. Metzger then suggested that it would be a nice thing to get a complete list of the homœopathic physicians of Pennsylvania who were commissioned in the army and navy and publish their names. Dr. Kline made a motion that a complete list of homœopathic physicians of Pennsylvania, who were commissioned in the army and navy be published in the transactions. Dr. Hillegas offered an amendment to the motion that the names be published at once. Dr. Kline accepted this amendment to his motion. The motion as amended was seconded and carried. (Published in *HAHNEMANNIAN MONTHLY* November, 1917).

In the absence of Dr. H. S. Nicholson, Chairman of the Committee on Membership, Dr. Metzger read the names of the following three applicants for membership: John H. McCutcheon, 4405 N. Ninth Street, Philadelphia; Dr. Everett A. Tyler, 1825 Chestnut Street, Philadelphia; Dr. Hugh T. Ryan, Schuylkill Haven.

These names were referred to the Board of Censors.

The President appointed Dr. Pratt and Dr. Raymer to act as censors with Dr. Moreland, in the absence of Drs. Stitzel and Sloan, and report at the next session.

Dr. B. F. Books, Chairman of the Committee on Homœopathy, read the following report:

REPORT OF COMMITTEE ON HOMOEOPATHY.

It is the consensus of your committee that homœopathy is, to-day, favored by greater recognition than has been its good fortune in the past. The prompt response of homœopathic physicians to the call of our Nation at this time of need, shows a greater percentage (per membership) than other schools of medicine. This has brought to the mind of the American people a pre-eminence of the principles which this willing response represents.

Homœopathy is to-day given greater official recognition and extended greater privileges by the hospitals throughout the State than ever before.

These facts we believe to be due largely to the results of

scientific research work of recent years, which forcibly brought to the mind of the medical world the fact that homœopathy is the fulfillment of all that is embodied in the basic and fundamental principles of the law of nature governing the elements so charitably given us by our Creator as the means of alleviating the sufferings of mankind. This should awake us to our duty to obligation, and lead us to accept the opportunity thus opened to us, to more thoroughly enlighten the medical world as to the proper and scientific method of application of these principles, and to educate the laity as to the truth and virtue of homœopathy. This can be accomplished by the power invested in affiliation of all our interests. Our parent organization has inaugurated a move of federation of all interests of homœopathy. Federation cannot be accomplished by optional membership. As federation is an act of unity, a covenant of all interests, membership must be automatic. The greatest obstacle to federation is membership fees, which, we believe, can be advantageously adjusted. Our local, State and National organizations are maintained by a stipulated membership fee, computation of which would be impracticable as a fee to membership of federation, therefore we wish to suggest to the Congress of States, that they determine upon a fee of seven dollars, to pro-rate three dollars to State Society, and four dollars to the American Institute of Homœopathy.

Automatic membership must have a beginning. This is normally invested in local society. As meetings of local societies have, invariably, a per capita expense associated, the current expense of same can be conveniently cared for by those meeting monthly, adding ten cents to the per capita expense, and those meeting quarterly twenty-five cents, these amounts, at stated times, being so small, little if any objection would be offered. Said membership fee of seven dollars to be collected by local societies, upon individual affiliation, and to be forwarded pro rata by the secretary of local society to State Society and American Institute of Homœopathy with a record of affiliation of such members.

Federation of our interests must be accomplished, and advantage taken of all that is invested in a unit of power, if we wish to fulfill our obligation, which will broaden the field for application of our principles, and thus greatly enhance individual interests. The importance of this movement is readily recognized. Not one State in the Union is anything near affiliated. Pennsylvania, with the largest number of homœopathic physicians, is less than 50 per cent. affiliated by State. New York State is very little better.

The report of the Women's Homœopathic League was read by Dr. Margaret Hassler, the Secretary-Treasurer of the League, and was as follows:

WOMEN'S HOMŒOPATHIC LEAGUE OF PENNSYLVANIA.

The Women's Homœopathic League of Pennsylvania sent out a circular letter to every physician's wife in Pennsylvania, the returns of which were twelve new members. Last year three students were financially assisted by the League in Hahnemann College to the amount of \$477. Every physician is asked to impress the importance of securing members for the League, not only upon themselves, but every patron of Homœopathy.

MRS. E. A. KRUSEN,

President.

On motion of Dr. Metzger, the report was received and filed, and the women commended and supported in their efforts.

Dr. Books made a motion that the dues of members in active military service be remitted. The motion was seconded by Dr. T. M. Johnston, of Pittston, and carried.

Dr. Anna Clark moved that the State Society endorse and urge that the medical corps admit men and women with equal rank and compensation. Dr. Metzger said that the motion should be that the request be referred to the Committee on Resolutions. This being satisfactory to the maker, the motion was voted on and carried.

Dr. Krusen appointed Dr. G. F. Moreland, Dr. Anna Clark and Dr. Theodore M. Johnston as the Committee on Resolutions.

The report of the Committee on Publicity was read by the chairman, Dr. Ralph Bernstein, of Philadelphia, and was as follows:

REPORT OF COMMITTEE ON PUBLICITY.

As chairman of your Committee on Publicity it gives me great pleasure to report to you that, more aggressively than ever before, and over a much wider field, we have sought, and with the most gratifying success are procuring, forceful and dignified publicity relative to this convention, the papers read and the discussions therein, and the broader aims and purposes of this society for the consistent strengthening and advancement of homœopathy.

Results have proven the wisdom, and even the economy, of engaging the services of practical men trained to all the twists and curves of publicity work, for the messages of our objects and ambitions now are being carried to the professional and lay mind throughout the entire State, and I am firmly convinced that the persistent pursuit of such a policy is one of the most necessary factors to the attainment of those laudable objects so clearly set forth in our president's annual address.

Preliminary to the convening of this fifty-fourth annual session, and in order that "all who ran might read," an advance story of more than a column length was sent to three hundred daily newspapers in Pennsylvania, for publication Sunday and yesterday. Considering that we are meeting at a time when practically every community is keenly engrossed in local political contests, and that the war news takes up much of the space in every publication, the results were most satisfactory and the "advertisement," if it may be so termed without too much of the commercial interpretation, was widespread.

With this first advance story there also were sent out one hundred and ten prints of the photographs of prominent members participating in our deliberations. To instance some of the results I may tell you that on Sunday the Philadelphia Inquirer, Press, Record and North American prominently carried stories approximating a column in length, with photographic lay-outs. On the following morning, yesterday, the Philadelphia Public Ledger gave us more than half a column under a display heading, while on the same afternoon the Evening Telegraph had upon its first page a photographic lay-out across three columns, together with a caption announcing the meeting opening today.

Arrangements have been made under which the Associated Press will be furnished with a daily resume of our deliberations, while lengthier publications are being sent to, and used by, the Philadelphia, Pittsburgh, Scranton, Wilkes-Barre and other daily newspapers throughout the State.

By this afternoon a hundred large display placards, announcing the meeting on Thursday of the section on Sanitary Science, which is to be participated in by the representatives of the War Department, Surgeon General's Office, State Department of Health and organizations devoted to the advancement of hygiene in this and New York State, will have been placed in store windows and other prominent places throughout Scranton, inviting the public to attend that meeting.

With the assistance of the membership in general, no opportunity is being lost to place ourselves squarely and advantageously before the whole people of our State, and to that end I ask that all those who are on the program to read papers send a copy thereof to room 328 as soon as possible, in order that a resume of them for publication may be made.

I firmly believe—and earnestly advance for your consideration the thought—that PERMANENT PUBLICITY should, from this time forth, be one of the foremost mottoes of our organization, for I am equally convinced that only through such a policy can we, with the success that we and our school of medicine deserve, bring our claims and contentions before legislative bodies with the public support that virtually will assure their enactment into desirable laws.

It was my strong hope, and still is, that definite action upon this extremely vital and all-important matter be taken before our adjournment on Thursday. I do not believe that another year should be allowed to elapse in desultory and scattered effort, when concentrated and practical effort holds the promise of such great rewards.

In such an action we would be but following the settled policy of the most successful corporations and associations in our country, and surely what has been so consistently beneficial to others should be equally advantageous to us.

I sincerely trust that the matter may be thoroughly discussed in this present convention; but if no action is taken at this time, I shall—to avoid taking further of your time and attention now—take the opportunity of discussing the whole matter in more detail in one or a series of editorials in our official State organ.

Dr. Heimbach made a motion as follows: “That the State Society recommend to the Board of Trustees that a permanent Bureau of Publicity be established.” Dr. Metzger seconded the motion, which was then carried.

Adjourned at 11.50 A. M.

SECOND SESSION.

TUESDAY AFTERNOON, SEPTEMBER 18, 1917.

The meeting was called to order at 3 P. M. by the President.

The annual report of the Superintendent of the Allentown State Homœopathic Hospital, Dr. Henry I. Klopp, was read by Dr. Harry E. Hoffman, of Allentown, as follows:

REPORT OF SUPERINTENDENT OF ALLENTOWN STATE HOSPITAL.

The Fifth Annual Report of the Homœopathic State Hospital to the Homœopathic Medical Society of the State of Pennsylvania, statistically covering the period from June 1, 1916, to May 31, 1917, is hereby respectfully submitted:

Movement of Population.—During the hospital year ending May 31, 1917, 342 cases, 181 men and 161 women, were admitted; of this number 321—171 men and 150 women—were first admissions; there were connected with the hospital on June 1, 1916, 1053 patients—526 men and 527 women; making the total number under treatment for the year 1395—707 men and 688 women. The lowest number under care during the year was 1003 patients, the highest 1107—an increase of 104. The population on September 1st of this year was 1099—548 men and 551 women.

The total discharges within the same period were 244—an increase of 12 over the previous year; of this number 64 were recorded restored, 38 improved, 16 unimproved, 10 not insane, and 116 died. In addition to the 244 direct discharges, 58 patients appeared on our records as connected, although absent from the hospital on furlough. Of those remaining May 31, 1917, and those connected by furlough, the probability as to recovery or improvement was considered favorable in 99 cases.

The average age of admissions was 40 years for the men and 41 for the women. Twenty-two were under 20 years; 59 between 20 and 30; 94 between 30 and 40; 74 between 40 and 50; 49 between 50 and 60; 40 between 60 and 80; and three were over 80 years of age.

Of the 64 discharged restored, 26 were under 30 years; 38 between 30 and 60. The duration of treatment in 13 cases was under 3 months; in 25, 3 to 6 months; in 12, 6 to 12 months; 10, 1 to 2 years; in 4, 2 years and over.

Of the 116 deaths, the average age was 52 years for men and 50 for the women; 4 were 80 years of age and over; 8, 70 to 80 years; 31, 60 to 70; the remainder were distributed between 20 and 60 years. The percentage on the whole number treated was .0831:

29 died from General Paralysis of the Insane.

16 died from Cerebral Hemorrhage.

7 died from Arteriosclerosis.

24 died from Tuberculosis of the Lungs.

15 suffered from Senile Psychoses with complicating physical ailments.

Medical Work—The Medical Department is constantly

making an effort to keep abreast of modern methods in the treatment of the individual psychoses, as well as intercurrent medical and surgical diseases.

The examination of the newly-admitted is thorough. A blood Wassermann is made on every case; lumbar puncture is performed on all organic cases and those having a positive blood Wassermann, and a routine examination made of the spinal fluid.

Typhoid vaccine, prepared and standardized in our laboratory, has been given to every patient in the hospital, including new admissions. In this way we hope to overcome the yearly development of sporadic cases during the fall months.

Treatment—With the opening of the Reception Building for the segregation of the hopeful type of cases, nine special continuous-flowing bath tubs were added to our treatment equipment—making a total of seventeen such tubs; in addition to this we have three hydro-therapeutic equipments. By this means of treatment and the use of neutral packs, mechanical restraint and seclusion are eliminated—except in a few surgical and homicidal patients in which it was used for a limited time for the protection of themselves and others.

With rest treatment, a large part of it on open air porches with southern exposure, attention to the physical health of the patient, hydro-therapy, and the indicated single homœopathic remedy, much is attained towards the restoration of the mental health of our patients. In convalescence, modified rest, exercise, diversional occupation, calisthenics and entertainment are added factors.

A study of the Medical Treatment for two years shows that 149 different single homœopathic remedies were prescribed each year, and 5116 prescriptions were made during this period.

An analysis of the Annual Work Report for the year ending May 31, 1917, shows the average number working daily 742 or 63 per cent. of the daily population.

Training School—The Training School for Nurses has 42 pupils enrolled. We have an affiliation with the Hahnemann Hospital and the Women's Homœopathic Hospital in Philadelphia, so that our pupil nurses receive obstetric, pediatric and surgical experience during their junior year as a part of the prescribed three years' course. Our second class to graduate consisted of eight seniors who received their diplomas in June.

Psychiatric Clinic—A Free Mental Clinic has been organized in the city of Allentown in co-operation with the Associated Charities and Dispensary, upon the same basis as the

one established in the city of Easton—in accordance with my report of a year ago.

Economy Through Efficiency—The trials in the operation of the hospital have never been greater than the past year. The demand for increased wages has been unprecedented in institutional experience. With this there has also been an increase in the cost of all that pertains to housekeeping requirements, especially food supplies. These conditions necessitate the strictest economy to enable us to keep within our maintenance income.

FOURTH SESSION.

WEDNESDAY MORNING, SEPTEMBER 19, 1917.

The meeting was called to order by the President at 9.45 A. M.

The report of the auditor was presented by Dr. B. F. Books, the chairman, as follows:

“The Auditing Committee wish to report that they have found the accounts of the treasurer correct.”

Dr. Metzger said that as a matter of record this report should be presented in writing, signed by the auditors; but he made a motion that this report be accepted in lieu of the written report that would be handed in later. The motion was seconded and carried.

Dr. Moreland reported that the Board of Censors had approved the names of Drs. R. Everett A. Tylor, of Philadelphia; Hugh T. Ryan, of Schuylkill Haven, and John H. McCutcheon, of Philadelphia.

On motion of Dr. Metzger these persons were elected as members of the society.

Dr. Hillegas made a motion that the State Society pay THE HAHNEMANNIAN MONTHLY an additional sum of fifty cents for each member of the society who had paid his dues for the year 1916; and that the State Society pay to THE HAHNEMANNIAN MONTHLY the sum of two dollars and fifty cents for each member of the society who should pay his dues for the year 1917, instead of paying the sum of two dollars for such member.

This was intended to make up for the increased cost of paper and printing and the loss of advertisements due to the war.

The motion was seconded by Dr. B. F. Books and carried.

The meeting was again called to order by the President at 11 o'clock, the hour set for the nomination of officers.

Dr. Edmundson nominated for President Dr. George B. Moreland, of Pittsburgh. For First Vice-President, Dr. Hillegas nominated Dr. Charles R. Haman, of Reading. For Second Vice-President, Dr. Metzger nominated Dr. G. Morris Golden, of Philadelphia. Dr. Golden declined the nomination, and nominated Dr. Albert R. Garner, of Norristown. Dr. I. D. Metzger, of Pittsburgh, and Dr. Ella D. Goff, of Pittsburgh, were renominated for Secretary and Treasurer, respectively, and Dr. W. Franklin Baker, for Necrologist.

Dr. Moreland tendered his resignation as a censor of the society, and his resignation was accepted. Dr. Hillegas then nominated Dr. Harry H. Lewis, of Ashland, for the position on the Board of Censors thus made vacant. Dr. W. Rayer, of Beaver Falls, was nominated for the position on the same board made vacant by the expiration of the term of Dr. Sloan.

Dr. Hillegas renominated Dr. Ralph Bernstein, of Philadelphia, for the position of State Society Editor of *THE HAHNEMANNIAN MONTHLY*.

To take the places made vacant on the Board of Trustees by the expiration of the terms of Drs. Bernstein, Ashcraft and Stewart, the following were nominated. Dr. G. Morris Golden, of Philadelphia, Dr. Daniel P. Maddux, of Chester, and Dr. E. A. Krusen, of Norristown.

SIXTH SESSION.

THURSDAY MORNING, SEPTEMBER 20, 1917.

The meeting was called to order by the President at 9.45 A. M.

Dr. Metzger, as a member of the Legislative Committee, stated that the legislation had been left in the hands of a special committee composed of a union of the three schools, regular, homœopathic and eclectic, Dr. Krusen being the secretary of this joint committee.

Dr. Krusen stated that at a meeting held at Harrisburg on the 23rd of November, there had been formed what is known as the Legislative Conference of Pennsylvania, Dr.

J. B. McAllister, Chairman of the Legislative Committee of the Old School State Medical Society, being the president of the conference, and Dr. Krusen himself being the secretary and treasurer. The committee is composed, he said, of an equal number of men selected from each of the three schools of medicine, the committee having the power to increase its membership to any number it sees fit. A number of meetings were held, and the committee succeeded in defeating the bill offered by the drugless healers. Dr. Cripps, of Philadelphia, had spoken of the excellent course the students at the Chiropractic College had, especially in anatomy; but Dr. J. M. Baldy produced a letter from the Anatomical School of Pennsylvania stating that they had not received from the Anatomical Board a single specimen in the last two years. Dr. Krusen went on to explain that unless there were a committee at Harrisburg to point out the evil nature of many of these bills, they would be in danger of passing the Legislature at some future time. In order to do this, the committee must represent all branches of the medical profession, and must be always at Harrisburg during the session of the Legislature, to defend the rights of the medical men of the State.

The committee endeavored to have an amendment to the Workmen's Compensation Law passed; but, on account of its having been but one year in operation, a good many were opposed to changing it so soon. It was also opposed by certain manufacturers, and was placed so far back on the calendar that it had not been reached. Dr. Krusen felt that the members of the profession did not appreciate the importance of taking care of these matters at Harrisburg. He had sent out 750 letters to different physicians in Pennsylvania, about one-third of these going to homœopaths, and the others to old school physicians. About two hundred were sent out by the eclectics, in addition, Dr. Krusen having sent them that number for distribution. Of the entire number sent out, replies were received from but two. He warned the members that during the coming session of the Legislature another effort would be made to secure to the physicians of Pennsylvania what belonged to them. He also warned them against the Health Insurance Bill, which the committee regarded as pernicious. He added that the conference solicited the help of every physician in the State.

Dr. Metzger explained that the Health Insurance Bill is a contract bill, which was introduced and is partly operative in England. The physician contracts to take care of a certain number of people, according to this bill; and it constitutes a serious menace to the medical profession.

Dr. Moreland stated that the Allegheny County Medical Society had sent him a telegram inviting the State Society to meet at Pittsburgh in 1918.

Dr. Krusen said that the invitation would be submitted at the next meeting of the Board of Trustees.

Dr. Metzger made a motion that the State Society contribute the sum of two hundred and fifty dollars towards the propaganda work of the American Institute of Homœopathy. The motion was seconded. After some little discussion as to whether the finances of the society would permit of this additional drain, the motion was voted on and carried.

The report of the Committee on the President's Address was read by Dr. G. Harlan Wells, as follows:

REPORT OF THE COMMITTEE ON PRESIDENT'S ADDRESS.

We wish to commend especially the President's staunch support of homœopathy and the principle of "*Similia similibus curantor.*"

Following the strong military spirit shown by the President in the first part of his address, we wish to recommend that he write, as president of our society, to each county and local society in the State, presenting the urgent need of the United States War Department for medical men, and suggesting to the president of each of such societies that he bring before its members this need, for their careful consideration, and especially urge the younger men to join the Medical Reserve Corps.

With his usual modesty the president of our society failed to state that the organization of the Legislative Medical Conference at Harrisburg was brought about mainly through his efforts. Eventually this conference of the three medical schools, representing all the medical men in the State of Pennsylvania, will produce powerful results. By their co-operation, the various societies will command the respect of the Legislature at Harrisburg, and be able to influence action on the various bills that affect the practice of medicine. We sincerely hope that they may be able completely to defeat the pernicious activity favoring compulsory health insurance.

The high cost of law-making vies with the high cost of living today; and in order to accomplish the results above mentioned, we must support financially our officers and our Legislative Committee at Harrisburg.

The war has made such a drain upon the number of physicians available that the medical colleges are unable to supply the demands for doctors, particularly from the smaller towns. We believe that this is a matter of so much importance that the State Society should take some recognition of it. The seven-years medical course, which we shall be compelled to introduce is a very expensive affair, and it is a question whether the matter has not been carried to extremes. We are not getting the results expected by the men who worked out this system. The number of medical schools has been markedly cut down, while the number of untrained men representing various cults, has greatly increased. These men cannot be compelled to take a seven years' course, but are ready to begin their work after three or four years. It is not fair to compel some men to spend five thousand dollars and seven years of time to get a medical education, if other men, who can do practically everything except give medicine, that the doctor can, are allowed to enter practice in half that time. The society should take some definite action as a protest against this undue lengthening of the course in medicine, which is driving young and competent men away from the profession.

On motion, duly seconded, the report of the Committee on President's Address was received.

Considerable discussion ensued on the matter of a change in the requirements, participated in by Drs. Edmundson, Metzger, Weaver and Stitzel and Dr. Lee, President of the American Institute of Homœopathy. Finally Dr. Metzger made a motion that a committee of three be appointed by the chair, to be known as the Committee on Medical Education, for the purpose of considering the matter and presenting a report at the next annual meeting of the society.

Dr. Heimbach offered an amendment which the maker of the motion accepted, that this committee confer with a similar committee appointed by the Medical Society of the State of Pennsylvania.

The amendment was seconded and carried; and then the original motion, as amended, was seconded and carried.

Dr. Krusen appointed on this committee, Dr. G. Harlan

Wells, of Philadelphia; Dr. I. D. Metzger, of Pittsburgh, and J. W. Stitzel, of Hollidaysburg.

The report of the Resolutions Committee was read by Dr. Moreland. It was as follows:

REPORT OF THE RESOLUTIONS COMMITTEE.

Many members of this society have, at great sacrifice, responded to the call of our country for service in the Medical Corps. We, as a society, desire to go on record as commending the admirable spirit shown, and to give assurance to them that in every way possible we will try to conserve their practices for them. We further pledge ourselves individually and collectively to follow the practice already inaugurated and put in force in many communities, of turning over to the families of those men who have enlisted, a certain percentage of the income derived from their practices during the continuance of the war.

"Making the world safe for democracy" is the work of the nation, making it safe for the individual, is the work of the medical profession. The Homœopathic Medical Society of the State of Pennsylvania, in furtherance of the attainment of this object, commend the action of Congress and the national authorities in their attempt to control the spread of venereal disease within the military zones and recognize the grave responsibilities resting upon the civil medical authorities to assist in every way possible in making effective not only those measures, but also those in reference to alcoholic indulgence. If these measures are necessary for the attainment of the highest efficiency in times of war, they are equally so in times of peace and we therefore urge our members not only to uphold the authorities at the present time, but to continue the work after the war is ended.

We believe also that it is of vital importance to the public health that housing conditions throughout the State be improved and we therefore express the conviction that there should be enacted a State housing code which will set minimum standards for every dwelling within its borders.

The Homœopathic Medical Society of the State of Pennsylvania admits to membership on an equal basis both men and women whose credentials conform to the rules and regulations governing the same. The society, therefore, endorses the application of women physicians for admission to the medical corps of the United States Army with rank and compensation equal to men, and urges that the same consideration be

given their application as given to that of male physicians.

The society desires to express its appreciation and deep sense of gratitude to all those who have assisted in making this present meeting such a successful one. The officers are to be congratulated on having, at such a time, gathered together so many physicians.

The secretary of the society is herewith instructed to express in writing to the local society, the press, to the Women's Homœopathic League, and to our guests who have so ably contributed to the success of this meeting, our appreciation of their services.

GEORGE B. MORELAND,
ANNA C. CLARKE,
THEODORE M. JOHNSON.

It was moved that the report of the Resolutions Committee be adopted. The motion was seconded and carried.

The society then took up the matter of the election of officers for the ensuing year, on motion duly seconded and carried. The nominations were read. It was moved and seconded that the secretary be instructed to cast a ballot for the officers nominated. The motion was carried. The secretary cast the ballot, and the following were declared elected:

President—Dr. G. B. Moreland, of Pittsburgh.

First Vice-President—Dr. W. H. Haman, of Reading.

Second Vice-President—Dr. A. R. Garner, of Norristown.

Secretary—Dr. I. D. Metzger, of Pittsburgh.

Treasurer—Dr. E. D. Goff, of Pittsburgh.

Necrologist—Dr. W. Franklin Baker, of Philadelphia.

Censor for Three Years—Dr. W. Raymer, of Beaver Falls.

Censor for Two Years—Dr. Harry Lewis, Ashland.

State Society Editor—Dr. Ralph Bernstein.

Trustees for Three Years—Drs. D. P. Maddux, Chester; G. M. Golden, Philadelphia, and E. A. Krusen, Norristown.

The secretary read a communication from the Eclectic Medical Association of Pennsylvania, assembled at Williamsport, addressed to Dr. Krusen, and sending greetings to the Pennsylvania State Homœopathic Medical Society.

On motion of Dr. Metzger, it was decided to return the compliment and send the greetings of the society to the State Eclectic Medical Association.

Dr. Krusen thanked all those present for the interest they

had taken in the various meetings of the society, and expressed the hope that they might all meet again in 1918, probably at Pittsburgh.

Adjourned *sine die* at 4 P. M.

HAEMATOGENOUS INFECTION OF THE KIDNEY.

BY

MAC PHERSON CRICHTON, A.M., M.D., WASHINGTON, D. C.

(Read before the Southern Homœopathic Medical Society.)

IT having been my fortune to have had a number of infections of the kidney, some of rather interesting type I thought that it might be of interest and instructive to us all to review them, particularly the septicallly infected renal organ. I will, therefore, take up a few minutes of your time and run over the case records of the more unusual ones.

Case 1—Man age 24 who had been ill for three weeks with a septic infection of the index finger of the right hand which was incised and gradually healed. After some time he developed a severe pain in his right kidney with a high temperature. Slowly the swelling in the right lumbar and hypochondriac region developed that reached nearly to the umbilicus and down toward the anterior superior spine of the ilium. The swelling was tense and very painful. The patient had the appearance of a very ill man, temperature at this time 103.8, pulse 140, red blood cells 20,400 with 85 per cent. polynuclear, 4 per cent. large and 11 per cent. small lymphocytes. Urine clear amber, trace of albumen, few pus cells, and occasionally hyaline cast. Diagnosis, perinephritic abscess.

Without cystoscopic examination, operation was made into the perinephritic region and a large quantity of thick creamy pus evacuated. Inasmuch as the patient's condition did not warrant it, the kidney *per se* was not examined, drainage of the abscess cavity being instituted. On the following day the temperature dropped to normal, then as quickly rose upon the second day going to 102, in the A. M. and 103 in the P. M. The abscess drained clean by the tenth day but as the temperature kept going up in the afternoon of each day, it was clear to me that in spite of the fact that I acquire clear normal

urine from the two ureterally catheterized kidneys, that the kidney upon the operated side must have an infected source. Three weeks following the drainage operation the incision was enlarged, the kidney found tightly embedded in the fatty capsule which was infiltrated and adherent to the renal organ.

The kidney was ablated. On its inspection the interior of the upper pole was necrotic for its entire one-half and completely sequestered, the pus of the sequester showed staphylococcus aureus. After nephrectomy the temperature dropped to normal and so remained, the patient making henceforth an uninterrupted recovery.

The peculiar circumstances to which I would call your attention are the unusual source of the infection from the septic finger, *i. e.*, hematogenous character, and the fact that in spite of the normal urinary findings we had to deal with a badly infected renal organ.

Case 2—Young woman 25 years old, who had been operated upon four years ago for appendicele abscess. Four months ago she was suddenly taken ill with severe pain in hypochondrium, radiating in to the back. She was nauseated and vomited frequently and copiously. Some fever was present. She had been confined to the bed ten days when first seen by me. Operative interference was declined at this time and she gradually convalesced.

Some month or more later there was a recurrence and she entered the hospital for observation. At this time her attack was quite the same as the former save that it was a bit more severe, the patient being very ill and looking septic.

When admitted the right side was very tender and rigid and a large mass could be felt in the right lumbar region fairly well outlined and mobile, it extended below the umbilicus and disappeared under the rib border. Bimanually the mass was palpable and appeared to belong to the renal structure. Temperature was at this time 103 and white cell count 17,200.

Cystoscopic examination and catheterization of the ureters showed the bladder mucosa injected. Ureteral opening normal. Urine from right side: acid sp. gr. 1.015 clear. Trace of albumen, many pus cells, some red cells and occasional hyaline casts. Urine from left side: acid sp. gr. 10.15 clear, trace of albumen, few leucocytes, functional test, normal in both kidneys

With the diagnosis of the right renal infection, the patient was removed to the operating room and the right renal region explored and the capsule being normal, the right kidney was taken out and removed. The kidney was found considerably enlarged and measured 12 cm. from pole to pole, about 7 cm. transversely, and 3 cm. antero-posteriorly. The capsule was readily stripped from the organ, leaving a yellow-brown surface, markedly raised areas ovoid or circular in form, measuring 6 cm. in diameter. These areas were soft and surrounded by a narrow zone of congestion. The smaller ones were crowded together near one pole and the largest measuring about 2 cm. in diameter, situated along the convexed margin. On section, raised areas on the surface are seen to correspond with the wedged-shape areas penetrating the entire thickness of the secreting parenchyma, where the renal tissue is soft, pultacious and necrotic. Smears from these areas showed innumerable polymorphonuclear leucocytes, but no very definite organisms. The calyces were not infiltrated or dilated and the mucosa of the calyces and pelvis did not show thickening or inflammation. Here and there were small petechie. The renal parenchyma between the infarcts was pale and slightly swollen, showing very marked alteration. The large vessels of the hilus contained no visible thrombi.

Microscopic examination of the section passed through one of the wedged shaped areas noted in the gross specimen showed in the region of the renal tissue to be diffusely infiltrated by polynuclear leucocytes so densely that the original renal elements were practically obscured. Here and there the remainder of the tubules could be found in the lumen of which could be seen pus cells in great numbers. Necrosis and liquefaction, on the other hand, was comparatively slight, although the centre of a few of the larger ones appeared to be undergoing commencing liquefaction. Rather haemorrhagic areas were noted. In section examined no definite thrombi could be observed in any areas, but the distribution and shape of the infected areas left no question as to the origin being haematogenous. Cultures from the kidney showed a pure dextrose fermenting Gram negative bacillus which failed to ferment lactose promptly, *i. e.*, one of the intermediate typho-colon group.

It is generally considered that haematogenous infected kidneys should be nephrectomized. A protest here, in the auth-

or's judgment, is timely against nephrectomy as a routine. There are two very distinct types of infection, one associated with pyuria and colon bacillus, the other without pyuria, usually with a few blood cells and generally due to staphylococcus aureus. One can almost invariably get along without a nephrectomy in the colon pyelonephritides, decapsulation or nephrotomy meeting the indications in even the severest forms, while no operation of a cutting nature will be needed in the milder cases unless there be stone in the kidney, (in which case, as a matter of course, the stone should be removed and preferably by the pylotomy method) yet the second group will most frequently call for a nephrectomy, though at times, resection may be practiced.

Case 3—Man, age 41 years, American born, had an attack of influenza in February, 1917, followed by pain in the right renal region, later developed chills, fever and sweats, lasting about three weeks. Later he improved to have a recurrence in April. For about ten days previous to my seeing him, he had had a replica of his former attack, during which time he had been "X" rayed by the U. S. Army Laboratory in both renal regions, the plates proving negative as to stone. With these attacks he developed a dysuria and pain referred to the right renal region, right testis and down the thigh, the attack being accompanied by nausea, vomiting and a high fever.

Past History—Had measles 33 years ago and typhoid 20 years back.

Examination—When first seen by the author, he was in the Homœopathic Hospital with a severe pain in the right renal region with tumor extending from the free border of the ribs to the anterior superior spine of the ilium, which was very tender and dull upon percussion, temperature at that time was 102.2 F., pulse 118, respiration 32; looked septic and a very ill man, with coated tongue, tender all over the belly, rigidity and the usual accompanying symptoms. Bowels normal, urine clear, amber, sp. gr. 1020 acid, trace of albumen, sugar negative. Microscope showed a few pus cells and some blood, with large quantities of phosphatic crystals. Renal efficiency, color appeared following the injection of "phthalin" in seven minutes; 40 per cent. returned in the first hour, and 20 per cent. in the second, white blood cells counted 14,500, haemoglobin 75.

The patient being too ill for further examination and the diagnosis being obvious, cystoscopic examination was dispensed with and the patient sent to the operating room for a peri-nephritic abscess.

Operation—An incision was made in the right post-lumbar region and after getting through the fascia, the finger was introduced and the fatty capsule torn open following which pus welled up into the wound, irrigation was practiced and the pus cavity washed out, rubber tubal drainage was employed and the case returned to the room.

The temperature and pain disappeared at once and by the third day the former remained normal, drainage was abandoned after the fourth day, a posterial position of the patient being sufficient, patient leaving the hospital at the end of the third week.

Laboratory Findings—Were pure cultures of *staphylococcus aureus*.

Remarks—These cases quoted represent a fair average of the little recognized cases of haematogenous infection of the renal organs. The first case being one of unquestionable infection from the septic finger, the infection coming through the blood stream. The second being one following appendicular abscess, which had been neglected, following this neglect nephrectomy was enforced, *i. e.*, too long delay in operating upon the appendicitis caused the loss of the kidney. Case 3 illustrates very graphically the consequence of a post-influenza sepsis, but contrary to No. 2, was operated upon in time to save the renal structure and save the organ from all of which we can draw our own deduction.

EDITORIAL

HOMŒOPATHIC PUBLICITY.

WORDS cannot too strongly endorse and commend the co-operative action of the Board of Trustees of the Hahnemann Medical College and the Pennsylvania State Homœopathic Medical Society in their joint pledge of liberal financial support for a consistent and aggressive publicity campaign in Philadelphia and throughout Pennsylvania for the advancement of homœopathy, a strengthening of the principles for which it stands, and a broader and more comprehensive understanding of its teachings and practices by the lay mind.

Actuated as much by patriotic purpose as by professional pride, the leaders of this new movement toward greater progress and wider recognition have launched it at the psychological hour when the nation is calling for more and more physicians for service with the colors, and when it is being brought home to the country at large as it never has been before that it is woefully short of the number of qualified practitioners which the grave emergency of war suddenly has demanded, and probably in the near future will even more insistently require.

Assuredly this is the time for homœopathy to assert itself—yes, unhampered by false modesty, to proclaim itself—and thus to gain for itself that to which its great merits give it title.

The great call, the call of a nation, is being made for doctors and surgeons, and yet more doctors and surgeons. In the cruel and acid test of war that which we and the members of the other acknowledged school have so long asserted and reiterated, now is being freely acknowledged and admitted. Cold proof has relegated to the obscurity of pronounced inability and inefficiency the hordes of “healers” and “drugless practitioners” who, through dangerously elastic legislation, have been permitted to practice their various “specialties” in this and other States in competition with the qualified surgeon and physician.

In such a situation several duties face us.

Inevitably the reaction of public opinion against incom-

petency must be strong and well defined. True, legislation does not always reflect or enforce public opinion, but with proper pressure it can be made to do so. And for that reason, if for no other, we most urgently need the sort of an educational campaign to give the public more than a subconscious idea of the utter failure of "fakes" and "quacks" to meet a requirement they always so boastfully claimed to fill. We want a strong, insistent, crystallized, fully informed public opinion that will support the legitimate medical and surgical profession in every proper demand it may make, either upon the State Legislature or the National Congress, for the revision of old laws, or the passage of new ones, to safeguard the public through the rigid enforcement of a correct standard of knowledge and experience for every person seeking to practice medicine or surgery in either or any of their branches.

That is a plain duty which we owe to the public and profession at large, and to ourselves and each other personally.

But we owe an obligation equally great to homœopathy. And there again the same instrument awaits us. Publicity! Public education in our principles and practices, in our accomplishments and success!

Young men are harkening to the call of the medical profession. The necessity for more physicians and surgeons, as already stated, is being brought to them forcefully every day.

What will homœopathy do? Shall it permit one school to extend its blandishments and public invitations, and "hide its own light under a bushel?" Certainly it should not, and some of its foremost leaders in Philadelphia and Pennsylvania have declared that it *shall not*.

All hail to the wisdom and initiative of that leadership! It is of the sort that promises a goodly measure of its justly proper rewards to homœopathy.

RALPH BERNSTEIN.

A BILL TO IMPROVE THE ARMY MEDICAL SERVICE.

ON February 5th, there was introduced into the Senate and House of Representatives respectively, at Washington, Owen Bill—S. 3748 and the Dyer Bill—H. R. 9563. These bills are identical and their purpose is to create the additional

ranks of Lieutenant-Colonel, Colonel, Brigadier-General and Major General, to be conferred upon members of the Medical Officers' Reserve Corps. At the present time the rank of Major is the highest that can be obtained by officers in this corps, and, consequently the opportunities for advancement are extremely limited.

At the present time many physicians of the highest standing are in the Medical Officers' Reserve Corps. These men, in a very large portion of cases, have given up practices that brought them an income many times in excess of the pay they receive from the Government and, furthermore, at the end of the war they will be compelled to return to their homes and practically begin to build up their practices anew. Very few of these men have the desire or the inclination to enter service as a permanent career and have offered their services to the Government purely as a matter of patriotism. It seems entirely unfair, therefore, that honors that are accorded to other departments of the Army Medical Service should not be extended to these men, and Congress should not need to be urged to pass such measures as are necessary to show that the nation appreciates the sacrifices these men have made, and is willing to express this appreciation in a practical manner.

Aside from any question of justice, the passage of such an Act would tend very decidedly to increase the efficiency of the Army Medical Service. Experience has shown that recommendations or orders given by Medical Officers to Line Officers of superior rank, may fail to carry the necessary weight. Furthermore, at the present time, the Officers in the Medical Reserve Corps lack power to enforce their recommendations and, as a result the efficiency of the Medical Corps is seriously interfered with. Should the Owen and Dyer Bills be passed by Congress, Medical Officers in the future will have the power to enforce their recommendations. This is a matter in which every physician, whether he is a member of the Medical Officers' Reserve Corps or not, should be interested and we would urge that our readers communicate at once with their senator and representative asking them to work for the passage of these two bills.

G. H. W.

GLEANINGS

THE X-RAY AND ITS EFFECT ON THE THYROID GLAND.—Many patients with so-called "shell-shock" and "soldier's heart" are suffering from hyperthyroidism. When there is reasonable ground to believe that the thyroid is overactive it should be treated by X-rays. In some cases the hyperthyroidism seems to be part of what has been called "defensive reaction of the subconscious"—*i. e.*, of a symptom complex, which makes the person unwilling to go again into dangerous surroundings. Such cases are unlikely to be benefited unless they are assured that a cure will not mean a return to the front.

It may be said that the therapeutic effects of X-rays upon the thyroid gland are well known, and that the dosage can be graduated to produce any desired effect on the quantity of its secretion. It should be clearly understood that this diminution, and, if necessary, complete suppression can be carried out with as much certainty as a surgical operation for partial ablation or total removal of the gland. When the secretion is vitiated as well as increased, partial surgical removal may fail to relieve. X-rays may fail for the same reason, although they tend in small doses to regulate as well as to depress. In short some cases cannot be cured by radiation, unless it be pushed to total and permanent suppression—the equivalent of the complete operation.

Sufficient evidence has accumulated to make it worth a trial in obstinate cases of ovarian disorders.

With regard to other ductless glands, X-ray treatment is in its infancy, but progress will doubtless be made in the future.

THE RELATION OF LYMPHATIC TO PULMONARY TUBERCULOSIS.—Dr. F. Harbitz, professor of pathology at the University of Christiania, has lately published his observations on the post-mortem material passing through his hands in the period 1904-15. His earlier work, published in 1905, on the frequency, localization, and modes of dissemination of tuberculosis, has been supplemented and criticised in the light of his later investigations, and the result is a valuable contribution to some of the most vexed problems of tuberculosis. The analysis of this work, contributed by Dr. K. F. Andvord in *Norsk Magazin for Lægevidenskaben* for July, shows that among the 2,906 necropsies in the years 1904-15 there were 431 deaths from tuberculosis, the relative mortality from which was, therefore, 14.8 per cent. Among children under 15 years the tuberculosis mortality was 19 per cent., among adults only 14 per cent. There were 203 cases of advanced tuberculosis of the lymphatics, including 61 of generalized lymphatic tuberculosis (32 adults, 29 children).

Dr. Harbitz has come to the conclusion that, as far as tuberculosis of the lymphatics is concerned, the disease usually spreads from one group of glands to another through the lymphatic system by a continu-

ous process. Spread of infection by more casual and intermittent means is, he believes, comparatively rare; but he suggests that hematogenous infection must be reckoned with when the first infection of a lymphatic gland is traced to childhood. According to figures, it is a discouraging fact that 40 per cent. of all the cases of generalized lymphatic tuberculosis in adults terminated fatally in chronic pulmonary tuberculosis. And in this form of pulmonary tuberculosis the disease seldom originated as a primary infection of the lungs by inhalation, but as a secondary, hematogenous infection from the lymphatic glands. Dr. Harbitz's investigations also afford a fairly reliable pathological, anatomical basis for the hypothesis that the pulmonary tuberculosis of adults is often a late sequel to infection in childhood. In 39 out of 219 cases of pulmonary tuberculosis (18 per cent.) in adults, he says, it was possible to demonstrate the presence of tuberculosis from earlier years, in most cases certainly from childhood. These old tuberculous lesions may have been, indeed possibly were, the source of the subsequent pulmonary tuberculosis. In other words, if his conclusions are correct, the pulmonary tuberculosis was anautogenous or endogenous re-infection. Tillisch, of Grefsen, has found among his patients suffering from pulmonary tuberculosis a history of exposure to infection in infancy in 18.5 per cent. That he should have arrived at practically the same figure as Dr. Harbitz is all the more striking as their methods were totally different; and both were bound to understate the case for infection in childhood. The tuberculin test, it may be noted, shows a far higher ratio of infection in childhood than 18 per cent.—(*Lancet*, Aug. 4, 1917.)

SURGERY OF THE SPLEEN.—Caldwell (*Southern Practitioner*, June, 1917) is inclined to class the splenomegalies as low-grade infections or toxemias. The finding of a pathological organism is quoted.

Surgery has been employed in the treatment of splenic enlargement from all causes, except the acute diseases associated with enlarged spleens, such as typhoid and typhus fever. Even hypertrophy, believed to be due to such diseases as malaria and syphilis, has, in a small number of cases, shown marked improvement after splenectomy, when medical measures failed to bring relief. It is for splenic hypertrophies that removal of the spleen is being employed most. Of course, tuberculosis, abscess, new growths, and injuries to the spleen have a definite foundation and indication for surgery. But the removal of the spleen for splenic anemia, hemolytic jaundice, the hypertrophic cirrhosis of Hanot, is employed because cures have been attained without knowing any reason for the satisfactory results. Splenic anemia is cured, or very greatly benefited, by the removal of the spleen, even in the rather late stages of the disease. The results obtained in hemolytic jaundice and Hanot's cirrhosis are not quite so satisfactory, but the results are such as to make the indication for surgery quite clear, in these conditions.

In the last few years splenectomy has been employed in an effort to at least control, if not cure, that dread disease, pernicious anemia. The early results obtained from splenectomy in these cases gave promise of great improvement in the treatment of pernicious anemia. However, the late results have been just as discouraging as the early ones were en-

couraging. It is remarkable how definite and uniform improvement is obtained in these cases after removal of the spleen. Seventy-five to ninety per cent of the cases surviving operation show immediate improvement in the clinical course, the blood picture maintaining many of the characteristics of pernicious anemia. While we recognize that the ordinary course of the disease is very bizarre, yet no other method of treatment has given such uniform improvement; hence we must attribute some definite influence to the surgery. Possibly, when we are able to properly select our cases of splenic anemia to be subjected to surgery, and also when we can supply surgery in an earlier stage, we may hope for more lasting improvement.

Mayo has observed that the cases of pernicious anemia, associated with definite splenic enlargement, derive the greatest benefit from splenectomy. The yellow type of pernicious anemia is suggestive of marked destruction of blood cells; the white, aplastic bone-marrow, which indicates different etiological factors, or at least involving different structures. This accounts for the greater improvement in the former type, which is associated with enlarged spleens. However, as the line of demarcation is so indefinite between the yellow type of pernicious anemia and acquired hemolytic jaundice, one may be easily mistaken in diagnosis, and the improvement be noted in the yellow type, because it was hemolytic jaundice and not true pernicious anemia.

As the boundary line between all the above-mentioned diseases, as well as certain forms of Hodgkin's disease, is so indefinite, any conclusions at which we might arrive must, of necessity, be indefinite. Banti himself acknowledged that splenic anemia, or Banti's disease, might be Hodgkin's disease of the spleen.

The author thinks that Krumbhaar sums up in a very concise and clear manner the indications for splenectomy in pernicious anemia in the following paragraph:

"In what cases of pernicious anemia should splenectomy be undertaken? One of two lines may be followed, and it is as yet too early to say which, if either, is correct. If splenectomy merely induces a remission, and this at present is the opinion of the majority of observers, it should be logical to undertake it only as a last resort, when all other measures have proved unavailing, and only with the hope of prolonging life; even under such limitations, however, the procedure has already proved its value, and in several cases moribund patients have been brought back to life of comparative well-being for many months. Assuming, on the other hand, that an occasional patient may be, for practical purposes, cured of the disease, and giving due weight to the view that greater and longer continued improvement is obtained, if the operation is performed before the disease has reached its final stage, it would then be advisable to undertake it as soon as possible. Another factor that may prove to be decisive is whether or not increased hemolysis can be proved. In those cases with clinically enlarged spleens, icteroid appearance and increased urobilin output without increased resistance of the erythrocytes, the prognosis is distinctly more favorable than in the opposite types. The condition of the bone-marrow is also important, splenectomy being contraindicated if the bone-marrow is persistently aplastic. It has also been a matter of clinical

observation that those individuals in whom spinal cord symptoms had already developed are less apt to be helped by the operation."

In a final report on fifteen cases operated at the Massachusetts General Hospital, only one was alive sixteen months after operation, and was in a serious relapse at this time.

W. J. Mayo takes a more optimistic view, while he gives no definite figures. He says: "But from our experience with nineteen patients, I feel justified in performing splenectomy in selected cases of pernicious anemia, and have at least the hope that, if it is done sufficiently early in the course of the disease, it will permanently check, if not cure, the condition." The only suggestion in the above as to what constitutes "selected cases" is the early cases.

Theoretically, at least, any measure that produces the immediate definite improvement that splenectomy does should have some real value. However, the value may be so meager that it is more than overbalanced by the mortality incident to the operation, which of necessity must be high, as any other major operation would be applied to such poor risks. In the reported cases that the writer has observed the low mortality is indeed surprising, not being any higher than splenectomy for any other condition. The mortality of splenectomy varies anywhere from 11 per cent (Mayo clinic), the lowest for any considerable number of cases, to 50 per cent.—*Therap. Gazette*.

DRAINAGE AND TREATMENT OF WOUNDS.—Maj. W. Pearson, in *The London Lancet*, concludes from his extensive experience that: 1. Efficient mechanical drainage is the essential factor in the successful treatment of infection. 2. The cardinal principles governing drainage are: Freedom of exit; gravity; capillary action. 3. Drainage-tubes should not be employed unnecessarily. They should effect the purposes for which they are used, and should not act injuriously in the wound. 4. Dressings should not be tight, of close texture, or waterproof. They should be exposed to the air while discharge is profuse. 5. Continuous irrigation aids disinfection by mechanical removal of discharge. It is usually not feasible when dealing with large numbers of cases. It is not necessary in order to obtain good results. 6. Free administration of fluids to the patient is an important adjunct in the treatment of sepsis. 7. The value of concentrated saline solutions and antiseptics as aids to disinfection is doubtful and negligible. 8. The use of salines and antiseptics in no way diminishes the necessity for free mechanical drainage. 9. Vaccines are not helpful in dealing with infection in wounds of war. 10. Rest is an important factor in wound treatment and should never be neglected. 11. Most of the complications and sequelae of infection are due primarily to inefficient mechanical drainage, and are therefore preventable. 12. Delay in healing is almost invariably due to local mechanical causes.

TREATMENT OF VARICOSE VEINS IN THE LEGS.—By David Lazarus, M. D., New York. Varicose veins in the leg may be caused by chronic constipation, pressure of the fetal head, continued standing upon the legs, congested liver, heart, kidney and many other conditions. After ascertaining the cause of the condition and instituting treatment for that

condition, the treatment of the varicose vein condition becomes of prime importance.

The medical treatment consists of absolute rest in bed in a recumbent position, with the legs slightly elevated, this being carried out for a period of about three to six weeks, overcoming or correcting the existing constipation, putting the patient on light, nutritious food and avoiding alcoholic beverages, and applying either a well fitting stocking or rubber bandage, either of which must only be applied while the limbs are slightly elevated and the patient is in a recumbent position. If inflammatory signs are present, then a wet dressing of a 2 per cent. alum acetate solution or the application of a 50 per cent. ichthyol ointment is of great benefit. Following this treatment, the patient may go about, but must wear the bandage or stocking which should be applied and removed while the leg is in a slightly elevated position. Treatment by medicine is of little avail, but medicine to correct errors of diet, constipation, and general anemia and run down condition should be given. A capsule consisting of extract *nux vomica*, grain $\frac{1}{2}$; acid arsenic, grain $\frac{1}{60}$, and phenolphthalein, grain $\frac{1}{2}$, is usually prescribed by me.

The surgical treatment consists of various operations, having as their basic principle the removal of the tortuosities and relief of pressure upon the veins. The simplest operation consists of tying off the veins in various positions, either by the subcutaneous method, which is to be deplored, or by open method. If the condition is moderately severe, the Schrady or the modified Schrady operation should be performed. In more severe cases of varicose veins of the legs it is necessary to operate upon the saphenous vein. Immaterial of what operation is performed the greater importance for success lies in the after care. This consists of absolute rest in bed for three or four weeks or more with legs slightly elevated, overcoming constipation, and avoidance of any tax whatsoever of the system in general. If both the superficial and deep veins are affected and edema of the legs is present, surgical treatment may be of little avail. In excising the veins it is always best to perform the operation a short distance above the site of tortuosity and enlargement of the vein. If ulcers are already present they may be excised and skin drafting performed.—*N. Y. Med. Jour.*

THE ANTISEPTIC ACTION OF ALKALINE HYPOCHLORITES.—Fiessinger and Clayne's researches on the antiseptic action of alkaline hypochlorites indicate:

1. Contrary to what is actually admitted hypochlorites of soda under the form of Dakin's fluid is a very weak antiseptic. Its germicidal activity varies according to the protein contents of the medium in which it works.

2. In pus, weak doses of Dakin's fluid activate bacterial propagation, and strong dosage is required to effect sterilization.

3. In muscular secretions, in order to exert a sterilizing effect, a flow of about 10 c.m. per centimeter cube in twenty-four hours is necessary.

4. Such facts explain the constancy of infection of wounds treated by the Carrel-Dakin solution.

5. The diminution of bacterial density is not proof of the sterilizing action of Dakin's fluid, but rather of the liquefying action of this fluid on necrosed tissues which favor bacterial multiplication.

6. The possibility of secondary sutures and the evolution of epidermization are not arguments which testify to the sterility of a wound.

7. The fortunate results obtained by irrigation with Carrel-Dakin solution in the treatment of war wounds are not attributable to a sterilizing action, but rather to the strongly proteolytic action which hypochlorites possess; such action is observable microscopically by the melting away of mortifying substances and the liquefaction of pus, and clinically by the transformation and splitting of albumin molecules. Carrel's method is a surgical lavage.—*Abstr. Intr. Obst. Surg., Surg. Gyn. and Obs.*, Vol. xxv, 417.

THEODORE J. GRAMM, M.D.

THE HEMOGLOBIN VALUE OF THE BLOOD IN SURGICAL SHOCK.—Bainbridge and Bullen have previously shown that shock is accompanied by loss of plasma from the blood into the tissues. The volume of the circulating blood is thus diminished and becomes more concentrated with subsequent rise in hemoglobin. In a patient suffering from shock and hemorrhage, the percentage of hemoglobin is the result of two opposing processes: Shock which tends to concentrate the blood and hemorrhage which tends to dilute it. A low hemoglobin value may indicate that the patient is increasing his blood volume at the expense of his tissue fluids; whereas if the hemoglobin value is near normal the physiological reaction to loss of blood is being counteracted by the tendency of shock to concentrate the blood. The conclusion from five cases is that in shock accompanied by hemorrhage a normal or nearly normal hemoglobin value indicates that the patient is unable to make up for the loss of blood by absorbing fluid from his tissues and intravenous injection of saline is desirable.—*Abstr. Int. Obst. Surg., Surg. Gyn. and Obs.*, Vol. xxv, 456.

THEODORE J. GRAMM, M.D.

SHOCK AS SEEN AT THE FRONT.—Archibald and Maclean have analyzed forty cases of shock, due chiefly to wounds of the abdomen and high explosive wounds of the extremities. In bad cases the temperature is below the usual 92 degree scale of the thermometer. Fatigue, cold and exposure to wet aggravate shock. When the blood pressure was below 75 mm. recovery was exceptional. While hemorrhage aggravates shock, there is a fundamental difference between the two. In severe shock there is apathy and cyanosis, as opposed to restlessness and blanching in hemorrhage. Another difference is that intravenous salt or blood transfusions are helpful in hemorrhage and useless in shock. Pituitrin has some value in moderate shock, but not in serious shock. Amyl. nitrite is of no value. When the systolic blood pressure is 65 or less recovery is rare. Cases whose blood pressure is low from hemorrhage alone will frequently recover with salt infusions. It appears that in shock the trouble begins in the vast capillary system, and is characterized chiefly by a loss of blood plasma into the tissues, and very possibly into the

tissue cells, rather than into the lymph spaces. This is not equivalent to plain hemorrhage inasmuch as the process is progressive, so that transfused blood is soon lost out of the bloodvessels just as is salt solution.—*Abstr. Int. Obst. Surg., Surg. Gyn. and Obs.*, Vol. xxv, 259.

THEODORE J. GRAMM, M.D.

IMPORTANT PRINCIPLES IN THE DRAINAGE AND TREATMENT OF WOUNDS.—Pearson insists that adequate drainage is the one absolute essential to good results. Those who pin their faith to antiseptics such as the hypochlorites, by means of which they believe they can diminish or destroy the organisms *in situ* admit that their drainage is faulty and ineffective in that they are unable to obtain satisfactory results by drainage alone. The large number of antiseptics in vogue shows the limitations of this treatment. The results from the concentrated saline treatment are due to the adequate drainage which Wright regards as essential. While it is generally recognized that sepsis cannot be adequately dealt with by antiseptics, etc., if unsupported by drainage, it is not generally recognized that wound infection can be thoroughly and efficiently controlled by mechanical drainage alone. Drainage sufficient in civil practice is totally inadequate in military wounds of similar magnitude, due possibly to the large number of anerobes. The chief factors governing the efficacy of drainage are free incision and loose drainage, counter incision for gravity drainage and capillary drainage secured by light packs to all parts of a wound and exposure to air to allow for evaporation. Drainage tubes should be used where dead space cannot be obviated with gauze packing or where dead tissue is present which it is inadvisable to remove. Large quantities of fluids by mouth also tend to promote free discharge.—*Abstr. Int. Obstr. Surg., Surg. Gyn. and Obs.*, Vol. xxv, 244.

THEODORE J. GRAMM, M.D.

NAIL PUNCTURE WOUNDS OF THE FOOT.—Clarke reports one hundred cases successfully treated. In sixty-two the injury was on the ball of the foot, mostly near the centre of the ball. None gave evidence of the nail having penetrated the sheath of the flexor tendons. Most of the cases were treated within fifteen or twenty minutes after the accident. The foot is thoroughly washed with soap and very hot water, then dried, and an area about two inches square around the puncture thoroughly washed with alcohol. Gasoline is then applied to the sole of the foot and after evaporating, iodine tincture is applied in and around the wound. A sterile probe is then passed without pressure and finds its way to the depth of the wound. It is important that this be gently done. After the probe fills the entire wound tract a hypodermic syringe is filled with 10 ccm. of iodine. The needle is inserted along the probe to the bottom of the wound and the iodine slowly injected and allowed to run out along the probe. This is somewhat painful. The total number of dressings was 104 with a total loss of time of 29 days for all cases. The longest time lost was seven days. Three cases were infected when they came for treatment, having delayed 24 hours or more in coming. In no case did tetanus develop.—*Obstr. Int. and Nat. Obstr Surg.*, p. 230; *Surg. Gyn. and Obstr.*, Sept., 1917.

THEODORE J. GRAMM, M.D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

ECHINACEA.—At the last meeting of the section upon homœopathic materia medica and therapeutics an interesting discussion ensued upon the merits of the purple cone flower. Dr. Joseph H. Caley was the first speaker and gave two interesting cases treated by it. The first was of a man, aged about 50 years, who had been cut by a knife, while fixing the trace of his horse. His arm became enormously swollen, the case assumed an alarming character and death was expected as a consequence. The chills down his back were a feature. His temperature was very high—106-108. Dram doses of the tincture were administered every hour. Case well in space of five days. Dr. Caley's other case was that of a woman with an infection of the breast. Curiously enough there was little or no incriminating pus to be noted. It also ran a high temperature—106. Dram doses again given and every hour as before, with a resultant cure. Caley was of opinion that large doses of the tincture were of urgent necessity in the serious cases. *The tincture of the fresh plant should alone be used and this has a light greenish coloration. It should never be brown. In serious cases of scarlatina the echinacea actually transformed them into simple cases in 24-36 hours, and they then went on without any complications.*

Dr. Carmichael spoke very much after the same fashion and gave two cases, one in a boy with an arm lesion and the other with a gangrenous toe to deal with. The doctor used it locally and internally at the same time. Was accustomed to procuring echinacea in pint bottles. He said he thought we were indebted to Dr. A. C. Cowperthwaite for the proving of the plant.

The value of the purple cone flower has recently been appreciated by the old school as the following has appeared in an issue of *The Medical Record* bearing date of November the seventeenth:

"In its physiological action, echinacea produces a feeling of intoxication, flashes of heat, headaches of a dull character, dull muscular pains, sub-normal pulse and temperature, cold and numb extremities, and increase in the specific gravity of the urine. All these symptoms pass off gradually within a few hours, showing that the drug has no continuing detrimental or toxic effects. Deaths from overdoses, however large, have never occurred. Therapeutic action. Echinacea produces direct stimulation of the catabolic processes, increase in glandular activity, and increase in the flow of saliva, sweat, and urine. It thus antagonizes all septic processes and facilitates the elimination of toxins from the organism.

Our laboratory researches, conducted for a period of over four years, have shown that echinacea raises the opsonic index, increases the phagocytic power of the leucocytes, and effects a shift to the right and normal in the neutrophiles ("Arneth count"), where a shift to the left had previously obtained. The leucocytes are directly stimulated by echinacea, their activity is increased, the percentage among the different classes of neutrophiles is rendered normal and phagocytosis is thus raised to its highest protective activity. Over 500 differential and Arneth counts were made from which the conclusions here set down were derived. Echinacea produces in the blood effects parallel with and similar to those produced by vaccines, without any of the objectionable features of the latter. Hyperleucocytosis and leucopenia are directly improved by echinacea: the proportion of white to red cells is rendered normal, as is the percentage among neutrophiles; and phagocytosis becomes very evident where formerly no sign of it could be detected under the microscope. As many as eight bacilli enclosed within one phagocyte were repeatedly counted, and this in cases where at the beginning of treatment the third class of neutrophiles had been from 10 to 20 per cent. less than the second class. By favorably influencing phagocytosis the number of bacilli is also diminished."

These observations are noteworthy and it would be interesting to have the results confirmed by men in our school. Some time has elapsed since Dr. T. L. Shearer, of Baltimore, wrote about the use of echinacea in a carbuncle which the doctor himself had been afflicted with, and which had responded in a singular way to the action of echinacea. Dr. William Boericke, of California, gives clearly defined indications in his *materia medica* for the use of the cone flower and speaks about the dosage in tincture form in one to five drops every two hours.

The paper of the evening was devoted to a consideration of the repertory and was read by Dr. J. L. VanTine. It will appear in full in this journal. Dr. Franklin Baker then made some very pertinent remarks. Dr. Baker has recently done work of an original nature in the industrial diseases and is much interested in the dissemination of a working knowledge of homœopathy as a vocational asset among the various members of our school.

PHILADELPHIA COUNTY SOCIETY: PRESENTATION OF CASES.—William B. Griggs: Case of a young Jewish child at the Children's Hospital, suffering with the clinical manifestations of tuberculous meningitis, as proven by the result of sedimentation of the spinal puncture. Actual tubercle bacilli were demonstrated by the pathologist. Dr. Griggs brought with him to the meeting a very fat chart with an enormous amount of data bearing upon the case and its care. Child was desperately ill but made a superb recovery under the doctor's care. Tuberculinum 2c was of great service in the case. Case is of note as it conclusively proves that such cases are not necessarily so very bad prognostically.

G. Harlan Wells: Case of a woman with a history of persistent cough which had been treated unsuccessfully for about fifteen years. X-ray examination revealed a dilated bronchus. Staphylococci and other bacteria were obtained but no tubercle bacilli. Dr. Wells used antimon-

ium tartaricum 30th in the case with almost immediate relief of the cough with complete recovery in four weeks.

C. S. Raue: Muriel W., aged 11 years. The child formerly had whooping cough and bronchitis but a persistent cough had remained. Singularly the cough bothered the child only on lying down. It was quite non-productive in character. The throat and adenoid vegetation had been treated and the uvula had been treated surgically. The condition of the child was so bad that it disturbed the rest of the family at night. On examination there was no organic disease of the heart, neither was pulmonary disease in evidence. No tubercular incrimination. Dr. Raue prescribed pulsatilla and other remedies with no result. In going over the case, however, he noted a swelling of the thyroid gland and the right lobe was bigger than the left one. The doctor then gave lycopus in the tincture with the subsequent cure of the child. In discussing the case Dr. Raue said there was an utter disregard of the dominant school with reference to this remedy. It was thought of much after the fashion of cactus by men of the old school. The doctor then read what Allen had to say in his hand book.

Dr. E. M. Howard made a few remarks about the remedy in question. Years before he had taken a trip to Niagara Falls. At which time he had a serious cardiac attack at night following an indulgence in beefsteak and coffee. It worried him greatly as the palpitation of the heart was accompanied by a sense of suffocation. On his return he went to see the late E. A. Farrington who made light of his fears and recommended lycopus which acted very favorably. Since this time the doctor has used it in just such palpitatory cases. Considers it now a kind of specific for such cases.

Dr. W. Franklin Baker spoke about some remarkable work done by a Frenchman in the present war with reference to restitution of the usefulness of a "paralyzed" member after loss of its fellow from war trauma. Pictures were used to illustrate what he mentioned.

Dr. Baker also made mention of the need for study of what he dubbed *homocopathic pathology*. Of late the old school are beginning to get under their skin a realization of a better kind of pathology. Selective affinities of certain bacteria for certain bodily tissues were filtering into their conception. In fact the whole tenor of thought was veering towards the Hahnemannian concept. This latter point was touched upon in discussion by Dr. Wells.

In this connection some pertinent writing has appeared recently from the pen of Dr. Charles E. Wheeler, of London. "The study of protoplasm has led to the formulation of certain biological laws, universally accepted, concerning its reactions to stimuli: the fundamental law of such reactions applying to all stimulating agents, whether chemical (as e. g., drugs), electrical, mechanical or other is that the same agent which in relatively large doses can damage or destroy life activity, can in a relatively smaller dose stimulate it. Whence it follows that if by experimenting with drugs upon the healthy we have learned the tissues which these agents have it in their power to injure (and to deduce this from the symptoms exhibited), and if we find these same tissues manifesting by similar symptoms the injurious effects of disease, then we can

confidently administer *small* doses of the drugs which we have independently found to have the power of damaging those tissues, knowing that the *small* dose will act as a stimulus to those very cells that need a stimulus; and this is to all intents the homœopathic law.”—*Charles E. Wheeler*, London.

“New, Old and Forgotten Remedies.”—A second edition of this work has appeared and as it contains information in a permanently collected form not to be obtained in any other volume it must of necessity be of marked value to the practitioner. It should be of especial interest to the man interested in our materia medica. Every medicament differs from every other. Each has its own range of applicability. Accuracy in prescribing along the line of similars is playing the game with the loaded dice in the hand of the skillful physician who knows his right indications.

GUAJACUM.—At a Philadelphia County Society meeting the usefulness of this remedy in respiratory diseases was spoken of by Dr. Harry S. Weaver. Provers under this remedy develop violent fever, a spotted and red blotchy face and a tight dry cough. The muscles and joints of the extremities become sensitive.

W. Franklin Baker: Case of a man 76 years of age. Had a case of what Dr. Baker considers cerebral oedema six months ago. Man lost entire use of the left side. Was taken to a well-known hospital and the condition cleared up the next morning. A kidney and heart examination disclosed a chronic myocarditis with an interstitial nephritis. The patient became depressed at the time of his alarming accident. Said, “he thought some one had transferred the left to the right arm.” He stayed in the hospital till hot weather came on and then went to Atlantic City (Galen Hall). He was irritable at the shore. Troubled by crying, in fact, began to break up generally. Also got on the “nerves” of the family. From the shore was packed off to Virginia (Hot Springs). His speech was slow and set. His sister, who evidently knew Dr. Baker, asked the latter kindly to prescribe for her brother. In considering the case Dr. Baker was struck by (1) the adynamia present—his sliding down in bed as if the life was seemingly going out of him. (2) His singular idea about the left to right arm transference mentioned above. The doctor prescribed baptisia 200th in the case. Within thirty-six hours an entirely changed man. Much brighter. The man now attends the stock exchange.

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FIFTY-FOURTH ANNUAL SESSION

A CLINICAL STUDY OF THE FIRST FORTY-EIGHT HOURS OF PNEUMONIC FEVER IN A SERIES OF TWO HUNDRED AND TWENTY CASES.

BY

G. MORRIS GOLDEN, M.D., PHILADELPHIA, PA.

PNEUMONIC FEVER, owing to the striking and characteristic clinical picture which it so often presents, has been known since the earliest times, not only to the medical profession but to the laity as well. Of the acute infectious diseases it has probably received more critical investigation and observation than any other of the same class. This is due to its prevalence as a disease, its mortality, and the fact that it forms 3 per cent. of all, and 6 to 7 per cent. of internal diseases.

If one will scan the literature upon pneumonic fever, it will be noted that early symptoms are strikingly absent. Undoubtedly prodromata would be more frequently encountered if their existence were more carefully investigated. Traube, who paid considerable attention to this question, held that this was the case and further stated that definite prodromes in certain instances lasting from several days to weeks oc-

curred. With this object in view, I wish to present for your consideration a study of the first forty-eight hours of pneumonic fever with especial reference to the clinical symptomatology.

The cases examined are taken from the records of Hahnemann Hospital, Philadelphia, occurring during the past four years and numbering two hundred and twenty. A difficulty to overcome in the study of the first forty-eight hours is the interesting fact that only fifty-eight of the two hundred and twenty cases, or slightly over 26 per cent., were admitted to the hospital during the first forty-eight hours, while the remaining 74 per cent. were admitted from three days to as many weeks after the inception of the disease, hence, one must rely upon the history in the large percentage of cases to investigate the early symptoms.

As regards the incident of sex, 152 were males, 68 were females, or in the proportion of a little over two to one. Of these, 192 were white, or 87 per cent., while 38 were black a percentage of 13. It has been stated that the negro race does not withstand pneumonia as well as the whites, and this is proven by the mortality of this series. In the 192 cases of whites, there were 52 deaths, a mortality of 26 per cent.; while the deaths among the blacks numbered 12 in 28 cases, or 43 per cent.

Age revealed the youngest one year and the eldest 81 years, with the following tabulation:

| | |
|----------------------|----|
| Under 10 years | 28 |
| Under 20 years | 14 |
| Under 30 years | 57 |
| Under 40 years | 42 |
| Under 50 years | 31 |
| Under 60 years | 23 |
| Under 70 years | 18 |
| Under 80 years | 6 |
| Under 90 years | 1 |

It will be seen that pneumonic fever is distinctly a disease of early adult to middle life, 70 per cent. occurring between the ages of 20 and 50 years.

It has been repeatedly shown by statistics that the disease exhibits very marked exacerbations during certain years and times of the year, notably during the late winter and

early spring months. This is probably due to the virulence of the organism which tends to increase in virulence with each passage through the human body, just as it tends to decrease in virulence when cultivated artificially. This is evidenced in the series of cases here studied by the following: Cases admitted during the late fall and early winter months were of a mild type with a mortality as low as 10 per cent.; while those of the later months were more virulent and severe with a mortality ranging from 40 to 50 per cent. A study of the monthly distribution of cases follows:

| | |
|-----------------|----|
| January | 27 |
| February | 20 |
| March | 47 |
| April | 20 |
| May | 20 |
| June | 15 |
| July | 7 |
| August | 6 |
| September | 7 |
| October | 13 |
| November | 11 |
| December | 27 |

This table demonstrates the well-recognized fact that the large majority of cases occur between the months of December and May which includes 73 per cent. of the number. It is interesting to note that during a period of nearly four years, only 20 cases or 9 per cent. were admitted during the months of July, August and September. Among the cases there were 22 which had given a history of previous attacks or 11 per cent. As regards recurrence, 17 gave a history of one attack; four, two attacks and one, three attacks. Of this number four died, with a mortality of little over 18 per cent. There is no doubt that a recovery from an attack of pneumonia makes a subsequent attack more likely, while in a greater number of the cases, successive attacks seem to be milder as evidenced by the lowered mortality of this series.

Pneumonia is distinctly a disease of sudden onset, such occurring in 146, or 67 per cent., and 72, or 33 per cent., having a gradual or insidious onset. There were many cases—about 20 per cent.—which had to be classed in the sudden

onset in which there was a history of vague symptoms or catarrhal conditions of the respiratory tract during which the patient was seized with rigors of some character denoting the onset of the lung conditions. Those of gradual or insidious onset gave no history of distinct chill but frequently that of chilliness. A factor of note is that the cases of sudden onset show 43 deaths in 146 cases, or 29 per cent.; those of gradual onset, 72 cases with 29 deaths, or 27 per cent. In other words, the onset has little effect on the prognosis.

A study of the prodromes or initial symptoms is instructive. Chill occurred in 86 of 118 cases of the series, presenting a history of chill in varying degrees, as an initial symptom, approximately, 73 per cent. of the chill cases and 40 per cent. of the whole number. The prodromes, which may either precede or replace the chill, were present in about 60 per cent. of the cases. Of this 60 per cent. approximately 75 per cent. to 80 per cent. preceded the chill, while the remaining 20 per cent. replaced the chill. These figures probably appear too high to the general observer, but a study of the records proves otherwise.

The most important prodrome recognized was that of a history of a cold, or a catarrhal condition of the upper or lower respiratory tract, of varying degrees lasting from a period of three or four days to as many weeks. This condition occurred in 63, or 28 per cent. of the series. It is worthy also of note that of the 63 cases 36, or 53 per cent. evidenced a history of chill at the ushering in of the pneumonic process, while 27, or 44 per cent. were gradual and the pneumonic process recognized by the result of the severe clinical manifestation and physical signs.

Injury to the chest wall occurred five times—a peculiar prodrome, and the interesting fact is, that the onset of the disease in all cases of this type was less than 48 hours, in one case, a distinct chill occurred five hours after the injury with a previous perfectly healthy history. It illustrates the fact that the period of incubation of pneumonic fever may be of very short duration.

Chest pain as a prodrome or initial symptom was noticeable in 55, or 25 per cent. of cases, and practically always of the “stitch-like” character in varying degrees.

The lesser prodrome and initial symptoms are as follows:

| | |
|---|---------------|
| Cough, 18 in 220 or | 9 per cent. |
| Anorexia, 8 in 220 or | 4 per cent. |
| Abdominal pain, 10 in 220 or .. | 4.5 per cent. |
| Epigastric pain and vomiting, 4 in 220 or | 1.9 per cent. |
| Headache, 7 in 220 or | 3.1 per cent. |
| General malaise and weakness, 10 in 220 or | 4.5 per cent. |
| Sweat, 3 in 220 or | 1.3 per cent. |
| Dyspnoea, 5 in 220 or | 2.3 per cent. |
| Delirium, 3 in 220 or | 1.3 per cent. |

Tonsilitis, arthritis and vertigo, occurred twice with .09 per cent., while apoplectic seizure, convulsions and coma occurred once with .045 per cent.

A consideration of the "chief complaint" of those admitted during the first 48 hours of the disease, numbering 58, may be epitomized as follows:

| | |
|---|----|
| Chest pain and cough | 19 |
| Chest pain | 14 |
| Shortness of breath and cough | 6 |
| Cough | 2 |
| Chest and abdominal pain | 4 |
| Abdominal pain | 2 |
| Vomiting with epigastric or abdominal pain | 5 |
| Arthritis (pain in joints) | 5 |
| Vertigo | 1 |
| Sweat | 2 |
| Delirium | 1 |

Chills with one or more of the above symptoms as "a chief complaint" only occurred in three instances, or about 5 per cent. This is rather a remarkable fact, when one considers the frequency with which a chill is encountered in pneumonic fever. It illustrates the point that what may be a very important symptom of a disease, is frequently overlooked by the patient, hence it shows the unreliability of the statements of many patients and the necessity of careful examination of cases.

It may be noted from a glance at the "chief complaints" that the symptoms of which a patient complains are those which cause actual suffering to the subject. It seems that about 70 per cent. of the "chief complaints" are referred to the chest as pain, cough and dyspnoea, while a most important point is emphasized, that 20 per cent. were referred to the gastro-enteric organs as vomiting, epigastric or abdominal pain.

A review of the data bearing upon the symptomatology of the first forty-eight hours—is of value and instructive. The most pronounced symptom is that of pain in chest, usually described as a "sharp or stitching pain." It was present in 150, or 70 per cent. of the cases, and about evenly divided in reference to right or left side. In about 90 per cent. of the cases it occurred during the first 12 to 24 hours. Chill of varying degrees was recorded in 118, or 53 per cent. of the cases. This symptom may be analyzed as follows: Chill, severe, 15, or 12 per cent.; chill (distinct) 37, or 31 per cent.; repeated chills, 9, or 8 per cent.; chilly or chilliness, 57, or 49 per cent. A history of no chill was seen in 28, or 12 per cent. cases. No mention of chill was noticed in 84, or 37 per cent. of cases. The effect of presence or absence of chill appears to depend upon the nature of the individual attacked and was notably absent in the young, the aged, and those showing a history of a chronic malady.

Cough was a prominent feature in 110, or 50 per cent. Recorded or absent 9 times, 4 per cent. It may be safely said that cough is present during some part of the disease in approximately 90 per cent. of those suffering from pneumonic fever. It was unproductive as a rule in the early stages as only 38, or 17 per cent. had a recorded history of bloody sputum during the first 48 hours, while 17, or about 7 per cent. gave a positive history of no blood.

It happened that abdominal pain seized 30 of these patients, or 14 per cent. These pains were so violent at times as to suspect appendicitis. The larger percentage of these cases occurred in young adults or children and were associated with a disturbed respiratory rate. The lesion in this class of cases was usually found to be basic, with a pleurisy at the base, or diaphragmatic in character—in one case it was due to a pericarditis.

A symptom closely associated with abdominal pain was

that of vomiting—present in 25, or 11 per cent., and also associated with about 80 per cent. of patients exhibiting the symptoms of abdominal pain.

Dyspnœa existed 35 times, or 15 per cent. in the series. It was invariably associated with pain when the patient complained of it as a symptom. In three of the cases it was associated with cyanosis, occurring once in a child and twice where the condition was associated with a previous history of a catarrhal condition of the respiratory tract.

Sweating or perspiration, which may occur at any time, most noticeably at the crisis, was present in 15 cases; it was noted in those of early years. Delirium appeared in but three of cases admitted during first 48 hours, or 6 per cent. These instances were children, age, 3, 13, 16 years respectively, and in all probability due to toxemia. We can surmise from this the fact that the delirium of pneumonia in alcoholics is not an early manifestation.

There were a number of symptoms noted that would occur in any acute infectious disease as a result of toxemia. These for clinical purposes may be termed "coincidental symptoms," they are as follows: Headache, 41 cases; weakness or prostration, 15. These manifestations occurred almost exclusively in those past middle life.

Sore throat, 5. Such cases usually being very toxic. Arthritis, 6; this type being treated for rheumatic fever. Oedema, limbs 4; always associated with a complicating cardiac and renal disease. Diarrhœa, 2. Hectic flush, 5. Herpes, 2. While this is encountered in 60 to 70 per cent. of cases it is rarely seen before the second day; not more than 1 to 2 per cent. appearing before that time, according to observers. Anorexia, 10; insomnia, 3; vertigo, 3; convulsions, 1, occurred in a child of three years of age; jaundice, 1; epistaxis, 1; syncope, 2; apoplectic seizure, 1; coma, 1. The last two named conditions occurred in senile subjects who entered hospital with history of apoplectic seizures day before admittance and the other in a state of coma, the pneumonia being part of a terminal condition.

As only 58 cases were admitted within 48 hours of onset of disease, a study of the pulse, respiration, temperature, etc., may have little value, due to the limited number of cases; yet a consideration of same can, no doubt, be interesting, or at least suggestive.

The temperature range showed wide variation, two cases being practically afebrile with temperature of 99 degrees F.; the highest noted was 105.3 degrees F., a child of three years with meningeal manifestation. No example of subnormal temperature was noted in the early cases, only two occurring in the entire series, and both of these associated with cardio-renal changes. As a rule, the temperature increased rapidly. Sixty per cent. between 102 to 104, the remaining 34 being below 101 F. From this it appears that temperatures of 104 degrees to 105 degrees F. are not as frequent as presumed during first 48 hours. In no case was there a crisis within the first 48 hours, nor any such history to suggest same in the whole series. Upon "one day pneumonia" one should be very skeptical.

The pulse showed extremes, ranging from 60 to 160 in two respective cases, both of which died. It was about equally divided as regards relation to temperature. It is evident from a study of the pulse rate in the early stages of pneumonia that it may be regarded as a valuable and reliable prognostic sign to wit: Of the occurrence of a pulse of 120 or over during the first 48 hours, there were 22, of these 11, or 50 per cent. died. It can be presumed that the mortality rapidly increased after the pulse passes 120. A study of the blood pressure has always been an interesting factor. This subject I presented to this society several years ago in a paper entitled a "Study of Blood Pressure in Pneumonic Fever," from which I concluded that when the blood pressure expressed in millimeters of mercury, fell below the pulse rate expressed in beats per minute, it was a serious omen and a guide as to when and how much to stimulate. The blood pressure in the early cases was only recorded in 23 instances, as follows: Hypotension, 9; normal, 10; hypertension, 4. This is according to age. In relation to pulse rate it was lower in eight instances, of which five died. Otherwise, about 60 per cent. of those exhibiting a blood pressure below pulse rate as stated died. The gravity of the respiratory condition cannot be inferred from the rate alone. Pain may be a prominent feature and such a patient is in much less danger than if a lower rate exists with cyanosis.

The expiratory grunt, so characteristic of a pneumonic condition was not stated at all. This is due to faulty record-taking.

The respiratory rate varied from 20 to 82; only 20 per cent. had respirations of over 40 per minute. While an exact danger line is hard to draw, those with respirations of over 40 per minute showed a mortality of 70 per cent. It is also an interesting fact to note that a pulse of 120 or over, associated with a respiratory rate of over 40 during the first 48 hours, 57 per cent. died.

The leucocyte count in 38 of the 58 cases was recorded as follows: No increase, 3 cases, two of which died. Thirty-five showed a leucocytosis 10 to 20,000; 19, 20 to 30,000; 13, 30 to 40,000 and above 40,000 four. In those exhibiting a leucocyte count of 30,000 or more during first 48 hours there were no deaths.

The urinary change was characterized by the absence of chlorides in 2, diminished in 19, and normal in 4. It appeared to have no effect on the prognosis, and can only be suggestive from a diagnostic standpoint due to its occurrence in other conditions, but more constantly in pneumonia than any other condition.

The subject of physical signs is necessarily limited in considering the early stages. There are several to which I wish to call your attention in the order of their relative importance, as gathered from the series:

1. Enfeebled or diminished breathing, compared with the opposite side and circumscribed in character. This was noted in 37 of the 58 cases, or approximately 68 per cent. This to the writer's mind is the most important early physical sign upon which to put reliance.

2. An exaggerated breathing associated with hyper-resonance, upon the opposite side of the chest, or in a neighboring lobe upon the affected side. Such a sign was demonstrable in 35, or 60 per cent. of the cases. This is a sign of distinct value for the reason that it is often mistaken for a bronchovesicular breathing, and, with its absence of increased vocal resonance, the process on the opposite side or contiguous lobe overlooked.

3. Rales. Crepitant in character, were present in 42, or 73 per cent.; although they are characteristic of the disease, yet they cannot be termed pathognomonic of the disease. The intensity of the rales varied.

4. Slight or distant increased vocal resonance was discoverable in 23, or 40 per cent., hence marked increase of voice

resonance with tubular breathing and distinct rales, cannot be looked upon as early physical signs but those of a well advanced stage of the disease, not occurring as a rule before the third to the fifth day. Unfortunately, it is at this stage that the majority of cases are diagnosed, hence the importance of the early physical signs.

A dictum in the treatment of typhoid fever is "early to bed and appropriate treatment" argues a low mortality. This is, no doubt, true to which every practitioner can attest. It was to the writer a surprise that a study of this fact in relation to pneumonia was quite different. Of the 220 cases, the mortality was 29 per cent. with 64 deaths; this includes those cases admitted in practically moribund states and dying within 24 hours. Of the cases which were admitted within the first 48 hours of the disease—58 in number—14 died, or 26 per cent., only a difference of 3 per cent. It is evident that pneumonic fever is not influenced by early rest and treatment, as in other acute infectious diseases.

The following conclusions from the foregoing summary may be drawn:

First: That prodromes are present in 60 per cent. of cases which may either precede or replace the chill, the most important of these being, history of catarrhal condition of respiratory tract, chest pain, cough, epigastric and abdominal pain with vomiting, headache, general malaise.

Second: The "chief complaint" of the patient in 60 per cent. of cases, is referred to the chest, in 12 per cent. to the gastro-enteric system; in only 5 per cent. did chill constitute the chief complaint.

Three: A study of the symptomatology reveals two great classes of symptoms. Those of the chest, consisting of chest pain, chill, cough, 60 per cent. Abdominal, consisting of epigastric or abdominal pain with vomiting in 14 per cent. of cases. Both types associated with disturbances of the pulse, respiration ratio. Such a collection of symptoms demands a careful examination of the chest.

Four: A blood pressure expressed in m.m. Hg. below the pulse rate, expressed in beats per minute, argue for an unfavorable outlook, as does a pulse rate of 120 or over, associated with respirations of over 40 per minute during the first 48 hours.

Five: A leucocytosis occurred in 92 per cent., in no case with a leucocyte count of 30,000 or over in the early stage did a death occur.

Six: The important early physical signs in the order of their importance are, (1) enfeebled or diminished respiratory sounds, (2) an exaggerated or puerile breathing with hyper-resonance upon the unaffected side or in contiguous lobes upon the affected side, (3) rales, (4) slightly increased and distinctly increased vocal resonance.

Seven: Cases showing a history of injury are characterized by a very short period of incubation, practically always less than 48 hours.

Eight: Onset whether sudden or gradual; chill present or absent and early rest in bed with treatment have little effect on mortality rate.

DISCUSSION ON DR. GOLDEN'S PAPER.

DR. JOHN M. LEE, Rochester, N. Y.: At the hospital with which I am connected, a surgeon brought in a case with symptoms of appendicitis, and operated for the removal of a healthy appendix; but within five hours, the diagnosis of pneumonia was perfectly established. We had another case with delirium that was diagnosed as meningitis, and in a little while a pneumonia occurred in that case.

DR. G. HARLAN WELLS, Philadelphia: As most of you are aware, pneumonia is the most fatal of all diseases. More people die of it, in its various forms, than of any other single disease. I do not wish to go into the statistics that the doctor has presented, because he has gone over them very carefully. It is remarkable that all the statistics on the mortality of pneumonia, covering one hundred years, show little variation. Dr. Wells, of Chicago, has collected cases from as early as 1818 to the present time; and the mortality rate, so far as we can get at the figures in the last hundred years has not varied greatly. In 1818-1820, it was 20 per cent. It now runs, in most hospitals, about 21 or 22 per cent. In the Pennsylvania Hospital at Philadelphia, it was 22½ per cent. If you take all varieties of institutions, you find a remarkably constant figure. I think, however, that when we say that during the last one hundred years about one patient in every four persons affected with pneumonia has died, we are about right. It would seem that the various systems of treatment have had very little to do with influencing the mortality rate.

The problem of the cure of pneumonia is still, therefore, a very important one.

There is one other point that I wish to mention, and that is the study of pneumonia, as Dr. Golden presented it, shows the importance of its investigation by the general medical man, if we are to increase our knowledge of the beginnings of the disease. Most of the textbooks on medical subjects were written by men who are teachers, and these men ordinarily do not see the beginnings of disease, which, in the majority of cases, are manifested by subjective symptoms. Dr. Golden's cases showed, for example, that in the first forty-eight hours of pneumonia, the physical signs are comparatively insignificant. The dullness on percussion, bronchial breathing and other things that we rely on were mostly absent. This is important, because I believe that if a careful study of the subjective symptoms were carried out in these cases of pneumonia and other diseases, we should find that almost every type of infection has certain distinctive subjective symptoms. In pneumonia, these seem to be pain in the side, a tendency to chilliness and abdominal discomfort. You notice how constantly these occur in infection by the pneumococcus. In streptococcic infection, you find certain other symptoms; and it is especially at the hands of the general practitioner that data of this sort must be gathered. I believe that Mackenzie, probably the most famous authority on the heart today, who started in the coal regions of England and practiced among the coal miners, commenced his work by studying these symptoms as they appeared in relation to cardiovascular disease. He states today that he believes that the most valuable contribution that he has made to science were the results of his studies among these miners.

We are all beginning to realize more and more that the pathological changes that we hear so much about and that do give certain physical signs, are end-results, and not beginnings; and the subjective symptoms emphasized by Hahnemann are the beginnings and would lead to a correct diagnosis, if we understood them, of the type of infection, long before we could reach it by recognizing these pathological changes. I have mentioned this, because I believe that all of us have an opportunity to help in this line, if, when you send a case to the hospital, you should attempt to give us, for our records, as accurate a statement as possible of the patient's symptoms in the beginning of the disease. Mackenzie has emphasized something that I believe no other writer has emphasized; and that is the mental symptoms in these cases. Dr. Golden, in

his summary, has not given a statement as to the mental symptoms of the patients, except to state that delirium was or was not present. I do not refer so much to delirium as I do to the less marked mental symptoms that these patients may experience. Of course, it takes time and patience to study these cases and get these symptoms out of the patients. They must be reported in a large number of cases, so as to get the accumulated data; but I believe that the effect of the toxins of disease on the central nervous system and the mental faculties is an important thing to determine, and I think that you will find that these changes will show very early, if the condition is more carefully studied. The paper represents an immense amount of study, and is a very valuable contribution to our society's transactions.

DR. ANNA C. CLARK, Scranton: While the paper was being read I told the doctor next to me that if I had lost as many cases as that, I should have been run out of town. The fact that I did not have such a death rate may be attributed, perhaps, to good luck and the class of people I got. Nurses are in the habit of taking care of surgical cases more than medical, because these predominate in hospital work, and as soon as the patient begins to run a fever, they become very much alarmed and want to stimulate. The internist is also very apt to want to stimulate, and I believe that we lose a good many pneumonia cases from over-stimulation. They forget that this makes a weakened heart pump harder through a solid substance; they forget that heart must naturally run a little weaker, and that they should coax it along, and not exhaust it entirely during the first onslaught of the disease. I feel that this is better judgment. The cases that I have lost have been cases that I have stimulated during the stage of greatest congestion, and the distress has been so great that everyone has urged stimulation. I believe that sometimes, if we could exercise a little "masterly inactivity," and not be so anxious to get the patients well, it would be better. By trying to push the patients over, we really help to kill them.

EARLY RECOGNITION OF MENTAL ABNORMALITY BY THE GENERAL PRACTITIONER.

BY

HENRY I. KLOPP, M.D., SUPERINTENDENT HOMOEOPATHIC
STATE HOSPITAL, ALLENTOWN, PA.

THE subject of mental diseases is a complex problem, especially the topic of early manifestations of mental disorders; their prevention is a social as well as a medical problem.

In the first place, permit me to impress upon you that mental abnormality, commonly called "insanity," is not one disease, but represents a number of different disorders which vary not only in their manifestations, but also in their causes.

The most effective method of proceeding against a disease, next to direct preventive measures, is by directing efforts against its early manifestations. In this way not infrequently the progress of the disease may be arrested, or the more serious consequences may be mitigated or prevented. A great advance will be made when, instead of regarding lightly persistent signs of nervous and mental disorder, the general practitioner will be constantly on the watch for mental symptoms, especially in the homes he visits, as well as in the consulting room, the dispensary, and the hospital ward. If he is watchful, he will observe many such cases; and if he recognizes early symptoms of mental disease, he will perform a decidedly valuable service by securing for them prompt treatment which is very essential. A like progress will be made when it becomes the custom for the patient to consult a physician who has had previous experience with similar cases, or who at least will take sufficient interest to study the patient's symptoms and give advice and treatment intelligently.

The early recognition and treatment of mental disorders primarily depends upon individuals. Early recognition cannot be expected until the prevailing general ignorance of the commonest facts concerning these disorders is appreciated and means taken to overcome it. Even in medical schools, until within recent years, mental disorders were given very little attention or none at all. A different conception of such derangement and its treatment must prevail to accomplish results, than that conveyed by the terms "insanity" and the "care

of the insane." The provision for the care of the sick, generally, must be more definitely extended so as to furnish what is needed for the treatment of mental cases.

The earlier a disease is diagnosed and given proper treatment, the better is the prognosis, requires no discussion other than the statement that it is equally important and applicable in mental diseases as in other abnormal conditions. Too frequently patients who are suffering from mental unbalance are not seen by physicians who have had experience in that line of work until the disease is so far advanced that treatment in a hospital for the mentally sick is sought as a last resort. Men who make a study of mental diseases do not see their patients until the symptoms are quite pronounced. For this reason it is obviously necessary that the general practitioner should recognize the incipient stages of mental disease if we wish to make a greater advance in its prevention. To do his part in the great field of preventive medicine, it is not necessary that the general practitioner be a psychiatrist, but he should be familiar with the causes and early manifestations of mental disease and with the importance of the subject; if unable to make a proper mental examination, or if he does not possess this knowledge, he should direct the patient accordingly.

When we realize the great prevalence of mental diseases, with the resulting impairment, the unhappiness and misery which they bring (especially to the relatives and friends of the patient) it would seem that more attention should be given this subject by the general practitioner. There can be no doubt of the place of the medical profession in the new movement for mental hygiene; and in our profession there has not yet been found an influence more powerful or a voice more likely to be heeded, than that of the general practitioner of medicine. It, therefore, devolves upon him to maintain that personal relation between doctor and patient upon which, after all, the usefulness of our profession depends.

Psychiatrists are ever ready to overcome the unfamiliarity of the general practitioner with mental diseases. They lament the fact that there is no branch of medicine in regard to which physicians, who are not engaged in its practice, are so ready to admit their ignorance and no class of cases which they are more anxious to avoid. They must understand that insanity means disease, also that the term represents not a

disease entity, but a group of diseases; that the term "insane" is a legal and not a medical one.

If we are going to accomplish anything in the prevention of mental diseases, we must know their causes and why people are subject to them. There are many causative factors that may operate to unbalance the mind; in fact few cases come to us who owe their condition to one cause. Upon close study of the etiology of mental diseases the fact is soon recognized that in the great majority of cases the disease is produced not by a particular or specific cause, but by a series of unfavorable conditions which first prepare the soil, and then by their simultaneous action, determine the outbreak of a mental unbalance. In the study of mental diseases, as in other departments of medicine, we find two causes operative, predisposing and exciting. While it is justifiable to distinguish theoretically these causes in psychiatry, it is often very difficult to decide whether any given cause belongs to the one or to the other group. The same pathogenic agent, as for example alcohol, may in one case create a predisposition which is brought into play by some subsequent causative factor; in another case, it merely brings out pre-existing predisposition. To illustrate, an individual of neuropathic ancestry and himself tuberculous, alcoholic and exhausted, has an attack of mental disease. Shall we attribute the attack to the exhaustion, alcoholism, tuberculosis or heredity? It is probable that all these enter into the causation of the attack, but it is difficult to determine the part played by each of them and to isolate the specific pathogenic agent. The predisposing causes are from their nature, in the main, inherited; although as already stated, a predisposition to mental disease may be acquired. We, therefore, have under this head as predisposing factors, in addition to heredity, alcoholism, syphilis, head injuries, the prolonged debilitation of disease such as the result of tuberculosis. Each of these alone may produce mental alienation, or it may render the nervous organization so liable that a breakdown may occur at the occasion of some incidental cause.

The venereal diseases, particularly syphilis, are of extreme importance in the causation of mental disease. Of equal importance both from a sociologic as well as medical standpoint, is alcohol. These two mentioned factors are generally regarded as being responsible for 25 per cent. of the mental diseases. Although at first thought this statement is alarming,

on second consideration it is reassuring, because both of these causes are strictly preventable.

In those suffering from general paralysis, the seeds of mental disease were sown in the bodies, ten, fifteen, twenty years ago in the form of syphilis. These patients are lost to us; there are young men and women who will contract syphilis today and tomorrow and thus become candidates for the disease whose annual death-toll in the State of New York (according to Dr. Salmon) is more than half that of typhoid fever, and more than that of erysipelas or cancer of the breast. It, therefore, becomes our duty to see that every youth is warned and properly instructed as an individual, before the temptations of the world are faced. As a profession we should be unanimous in taking the first great step toward the prevention of insanity from syphilis, and the control of the disease itself, by treating it as we do other infectious and contagious diseases.

The overcoming of alcoholic mental diseases means the prevention of the habitual use of alcohol. We must spread abroad the truth that he who wishes to attain the highest possible mental efficiency cannot afford to subject his brain to the disastrous effects of alcohol. We must train and assist the young in the development of sufficient character and powers of resistance to enable them to lead temperate lives in all things. The knowledge should be imparted by the general practitioner that every individual represents the sum total of the vices and virtues, faults and perfections, strength and weakness of his remote ancestors, plus special morbid conditions, or otherwise, which existed among his immediate progenitors. In the question of education, occupation and marriage, the consideration of heredity is invariably forgotten or entirely ignored by most people; the peculiar belief that marriage cures nervous and mental trouble, a belief not only common among the laity but unfortunately also among doctors, is a dangerous one.

To determine whether a person is mentally unbalanced is easy if definite delusions are manifested which are of such a character that they may be recognized by their content; or if hallucinations, with the firm belief in the objective reality of the false sense perception; or if the characteristic mental and physical symptoms, as in general paralysis, confirm the existence of a mental disease.

During the early manifestations of a mental disease, it requires careful observation and study of the patient's symptoms to determine if there is a "prolonged departure from the individual's normal standard of thinking, feeling and acting." In mental disease it is of the utmost importance that the physician carry out a definite method of examination of the patient. This should include family history so as to give careful consideration to the importance of heredity as an etiological factor; followed by personal history from birth and previous to the disease; the onset of the disease, and finally, the present manifestations. Same should also include a thorough physical and neurological examination; this is mentioned for the reason that there are too few physicians who make a thorough examination of their patients.

In studying an individual's normal standard, it is necessary to remember that every man is a law unto himself, that there is no uniform standard of thinking, feeling and acting. The change in an individual's characteristics may be displayed in a complete change of character, tastes and tendencies, feelings and judgments. This change may be slight or concealed by the patient and sometimes can be observed only by the nearest relatives, or after a careful examination; sometimes it is so great as to attract immediate attention.

The difference between the person who may become mentally unbalanced and the one who will not, is one of hereditary predisposition. Take two persons, be they child or adult, suffering from a similar type of fever; the one may become violently delirious, and the other not. The same applies to the excessive use of alcoholic liquors; the one in time will manifest definite mental symptoms, the other not; in others, in time it affects one or more viscera such as the gastro-intestinal tract, liver, heart and kidneys, instead of the brain. Finally, let two men be equally exposed to adverse factors recognized as causes of mental disease; the one will succumb, the other will remain normal.

One of the most promising fields for early treatment as well as prevention is among the children in the public schools. In some of our cities provision has been made for the examination, by physicians specially qualified in mental disorders, of children backward and difficult to manage. Quite a percentage of mental breakdowns have their origin in difficulties of adjustment occurring during childhood. We should con-

stantly insist on the importance of the early years of life for the formation of stable habits and the production of character, and upon the necessity of paying much more attention to the years of infancy and early childhood, from the viewpoint of mental hygiene. I believe it is possible to study these children who present certain danger signals, and so outline their education as to correct the weak points and perhaps prevent hopeless disaster in the future.

It is the duty of the physician to study such danger signals as appear in the form of moods, wayward reactions, lack of stability, day dreaming, lost capacity for occupation, odd attachments, unwise enthusiasms, unusual interest in religion or abstract questions; and to make a serious attempt to know what factors beneath the surface led to the observed peculiarity; also such early manifestations as reticence, seclusiveness, stubbornness, brooding, sensitiveness, unfounded suspiciousness, together with strange behavior; furthermore, all sorts of so-called nervous symptoms, moodiness, depression, indecision, insistent doubts and uncertainties, uncalled-for feeling of being at a disadvantage, exaggerated anxiousness and timidity, feelings of inferiority, sexual uncertainties and doubts, peculiarly marked mental attitudes, visionary tendencies, unusual elation and erratic conduct.

What I have endeavored to accomplish is, to impress upon you the importance of mental hygiene and the fact that a large percentage of all cases of mental diseases are now definitely known to be due directly to alcohol and syphilis.

When physicians will learn to earlier recognize "departure from the individual's normal standard of thinking, feeling and acting," they will do much toward counselling regarding marriage of people with neuro and psychopathic tendencies and with syphilitic disease; also be more helpful concerning the hygiene of pregnancy, of birth, of childhood, of puberty, of adolescence, of the climacteric period, in relation the education of backward or peculiar children, and with reference to sexual and occupational hygiene, and above all, mental hygiene.

DISCUSSION ON DR. KLOPP'S PAPER.

DR. HARRY F. HOFFMAN, Allentown: Mental defects are attracting a great deal of attention at present in clinics in large cities. We are having clinics in Allentown and Easton, and

meeting people with children having some mental problem to face. The patients are brought in by school teachers, sent by nurses, or brought by parents who have had trouble with their children. We also have attending the clinics people who feel that there is something abnormal or lacking in their mental make-up. The increased attention given to mental disorders and the improved attitude towards them is encouraging. Coming up in the train this morning, a remark was made that it was something of a shame that a certain person was convicted of mental trouble. That is still the incorrect attitude maintained by some, that mental trouble is punishable and puts the person having it in the penal class. The correct idea is that it is a form of illness; the person having it should not be any more punishable than one having cardiac disease, or a person who contracts typhoid fever or some other disease. Mental disorder is an evidence of sickness; and the person afflicted with it should be treated as a patient. He should receive care, instead of simply being confined and ostracised. That is the line of practice in mental trouble. If a person having a mental disease realizes that he is considered, not as a criminal, but as a sick person, that his case will be studied and treatment outlined, the prognosis in his case improves at once. We can do something for him, if he gains that attitude.

I might extend an invitation to the members of the profession to call on us at the State Hospital in Allentown, and see the character of the work that we are doing there. They will then possibly get a different idea regarding the insane.

THE RESPONSIBILITIES OF WAR.—Courage, fortitude, loyalty and self denial strengthen and ennoble. They are the virtues of calm weather, but more eminently of days of storm and stress. War permits no flights from responsibility. Every obligation becomes more binding, both in relation to the personal life and the good of the whole—the community or state. It may seem a paradox that in time of war when life appears to be held most cheap, life and health come to be thought of as most valuable. The reason is plain. Physical vigor, physical endurance, physical power begin to have an increasing value in the minds of men. Man—the physical man—counts, and men begin to make the most of men. The attitude toward man is the same as that toward the newest kind of rifle or the latest type of cannon. What is the best kind and what characteristics are most useful. Even with our brief experience we have awakened to the nation's need for men with fewer physical defects and greater physical power. The nation is beginning to see that if there had been more interest in public health in time of peace there would be now less need for long months of training for endurance of necessary hardships incident to camp life.—Oscar Dowling, M.D., *Quart Bull.*, Louisiana State Board of Health, December, 1917.

BUSINESS TRANSACTIONS

OF THE

**Fifty-Fourth Annual Session of the Homœopathic
Medical Society of the State of Pennsylvania
continued****September 18th, 19th, 20th, 1917****HOMŒOPATHIC HOSPITALS.**

The Children's Homœopathic Hospital of Philadelphia, located at Franklin, Thompson and Eighth Streets, Philadelphia, Pa., was incorporated March 5, 1877, and opened to patients June, 1877. The secretary is Walter Strong, M.D., of 2105 North Thirteenth Street, Philadelphia, Pa. Number of beds 175, also 25 wall cribs in maternity wards; number of patients treated last year 1,233 in wards and 21,154 in dispensary. Number cured, 889; relieved, 148; not relieved, 26; died, 170. The estimated value of hospital and grounds is \$334,385.00. The sources of income are voluntary contributions and State aid.

Information given by Aug. Korndoerfer, M.D.

The Easton Sanitarium, located at Easton, Pa., was incorporated in 1895 and also opened to patients in 1895. The executive officer is C. Spencer Kinney, M.D. Number of beds, 30; number of patients treated last year, 50; number cured, 12; relieved, 19; not relieved, 13; died, 6. The estimated value of hospital and grounds is \$42,000.00. The source of income is from private patients.

Information given by C. Spencer Kinney, M.D.

The Hahnemann Hospital of Scranton, Pa., was incorporated in 1897, and also opened to patients in 1897. The secretary is Miss Janet Storrs, 640 Monroe Avenue, Scranton, Pa. Number of beds, 110; number of patients treated last year, 1,319; number cured, 1,054; relieved, 167; not relieved, 4; died, 94. The estimated value of hospital and grounds is \$225,000.00. The sources of income are appropriation from State of Pennsylvania, donations and receipts of board of patients.

Information given by Mary F. Haws, R.N., Superintendent of Hospital.

The Homœopathic Hospital of Pottstown, Pa., was incorporated in 1914 and opened to patients in July, 1914. The president is E. B. Rossiter. H. M. Lessig is secretary. Number of beds, 25; number of patients treated last year, 165; number cured, 139; relieved, 16; not relieved, 3; died, 7. The estimated value of hospital and grounds is \$50,000.00. The source of income is from patients.

Information given by E. B. Rossiter, M.D.

The Hahnemann Medical College and Hospital, located on Fifteenth above Race Street, Philadelphia, Pa., was incorporated in 1885 and opened to patients in 1885. The secretary is William G. Foulke, Esq., Franklin Building, Philadelphia, Pa. Number of beds, 320; number of patients treated last year, 4,635. Number of patients cured and relieved, 4,358; number died, 277. The estimated value of hospital and grounds is \$1,250.00. Sources of income are State aid, legacies and endowments.

Information given by C. V. Clemmer, M.D., General Director.

The Homœopathic Medical and Surgical Hospital and Dispensary of Pittsburgh, Pa., was incorporated April 4, 1866 and opened to patients July 20, 1866. The secretary is George L. McCoy, 1228 Fulton Building, Pittsburgh, Pa. Number of beds, 160; number of patients treated last year, 4,788, and 11,049 treated in dispensary; number of patients cured, 3,559; relieved, 973; not relieved, 107; died, 149. The estimated value of hospital and grounds is \$666,238.77. The sources of income are State of Pennsylvania, income from patients and contributions.

Information given by C. A. Lindblad, Superintendent.

The Homœopathic Medical and Surgical Hospital, located at 135 North Sixth Street, Reading, Pa., was incorporated November 12, 1890, and opened to patients August 8, 1887. C. H. Ruhl, Esq., is president, and Wm. McHose Boyer is secretary. Number of beds, 81; number of patients treated last year, 1,472; number cured, 950; relieved, 398; not relieved, 30; died, 94. The estimated value of hospital and grounds is \$100,000.00. The sources of income are State and county aid and from private cases.

Information given by L. K. Wagner, R.N., Superintendent.

The Homœopathic State Hospital, located at Allentown,

Pa., was incorporated in 1901 and opened to patients October 3, 1912. Dr. Henry I. Klopp, superintendent, Homœopathic State Hospital, Allentown, Pa., is the executive officer. Number of beds, 1,150; number of patients treated last year, 1,395; number of patients admitted to hospital, 342; number cured, 64; relieved, 38; not relieved, 16; died, 116. The estimated value of hospital and grounds is \$1,570,639.00. The sources of income are from the State, county and private patients.

Information given by Henry I. Klopp, M.D.

The Riverview Private Hospital, of Norristown, Pa., is not incorporated. It was opened to patients July 12, 1917. The executive officer is Dr. E. A. Krusen, Boyer Arcade, Norristown, Pa. Number of beds, 15; number of patients treated last year, 3. Number cured, 2; relieved, 1. The estimated value of hospital and grounds is \$40,000.00. The sources of income are hospital and private funds.

Information given by E. A. Krusen, M.D.

St. Luke's Homœopathic Hospital, located at Broad and Wingohocking Streets, Philadelphia, Pa., was incorporated March 9, 1896, and opened to patients January 9, 1896. The executive officer is Dr. D. Roman, 1904 South Rittenhouse Square. Number of beds, 55; number of patients treated last year, 1,244. Number cured, 1,012; relieved, 115; not relieved, 40; died, 77. The estimated value of hospital and grounds is \$150,000.00. Sources of income are State aid, board of private patients and donations.

The West Philadelphia General Homœopathic Hospital, 1234 North Fifty-fourth Street, Philadelphia, Pa., was incorporated December 15, 1904, and opened to patients January 25, 1905. The secretary is William T. Clay, 6325 Jefferson Street, Philadelphia, Pa. Number of beds, 40; number of patients treated last year, 847; number of patients cured, 736; number relieved 35; not relieved, 7; died, 69. The estimated value of hospital and grounds is \$31,000.00 (real estate). The sources of income are various.

The Woman's Southern Homœopathic Hospital, located at 733-745 South Broad Street, Philadelphia, Pa., was incorporated in 1896 and also opened to patients in 1896. The secretary is Miss A. M. Miller, 1911 Mt. Vernon Street, Philadelphia, Pa. Number of beds, 52; number of patients treated last year, 814; number of patients cured, 664; relieved, 71;

not relieved, 16; died, 29. The estimated value of hospital and grounds is \$135,000.00. The sources of income are State of Pennsylvania, board of patients and contributions.

Information given by Lydia Webster Stokes, M.D., Medical Superintendent.

The Women's Homœopathic Hospital of the Association of Pennsylvania, located at Twentieth Street, Susquehanna Avenue and Dauphin Streets, Philadelphia, Pa., was incorporated in 1882 and opened to patients in 1884. The secretary is Mrs. Fanny L. Skinner, Philadelphia Bank Building, 421 Chestnut Street, Philadelphia, Pa. Number of beds, 135; number of patients treated last year, 2,501; number cured, 2,147; relieved, 265; not relieved, 16; died, 73. The estimated value of hospital and grounds is assessed at \$225,000.00. Sources of income are State aid, donations, board of patients and endowments.

Information given by A. L. Stewart, M.D., Superintendent.

The Wyoming Valley Homœopathic Hospital, 149 Dana Street, Wilkes-Barre, Pa., was incorporated June 1, 1911, and opened to patients June 1, 1911. The secretary is B. C. Price, 31 Butler Street, Kingston, Pa. Number of beds, 34; number of patients treated last year, 525; number cured, 482; relieved, 28; not relieved, 16; died, 19. The estimated value of hospital and grounds is \$50,000.00. The sources of income are State Aid, board of patients and contributions.

Information given by Georgina I. Campbell, Superintendent.

HOMŒOPATHIC MEDICAL SOCIETIES OF PENNSYLVANIA.

The Allegheny County Homœopathic Medical Society, of Pittsburgh, Pa., was organized December 9, 1864. Dr. Charles A. Ley, of 629 Union Arcade Building, Pittsburgh, is secretary. Dr. W. H. Cooper, Oakmont, Pa., is president. The annual dues are \$3.00. The meetings are held the third Wednesday of each month, except July and August, at 8.30 P. M., at the Wallace Laboratory, Centre and Aiken Avenues, Pittsburgh, Pa.

Information given by Charles A. Ley, M.D.

The Alumni Association of Hahnemann Medical College

and Hospital of Philadelphia, was organized in 1885. There are now 1,650 members. The secretary is Benjamin K. Fletcher, '95, of 344 South Sixteenth Street, Philadelphia, Pa. There are no annual dues. The yearly meeting is held the first Thursday in June.

Information given by B. K. Fletcher, M.D.

The Beaver County Homœopathic Medical Society of Beaver County, Pa., was organized in 1883. There are thirteen active members. Dr. Wm. Raymer, Beaver Falls, Pa., is secretary, and Dr. M. M. Mackall, of Monaca, Pa., is president. The annual dues are \$5.00. Monthly meetings are held at the home of members.

Information given by William Raymer, M.D.

The Blair County Homœopathic Medical Society, located at Altoona, Pa., was organized in 1902. There are now fourteen members. F. B. Forrest, Bellwood, Pa., is secretary and Clive K. McGarrah, 825 Eighth Avenue, Altoona, Pa., is president. The annual dues are \$1.00. Meetings are held each month.

Information given by B. F. Books, M.D.

The Central Pennsylvania Homœopathic Medical Society of Dauphin, Lancaster and York counties, was organized January 11, 1900. There are 49 members. J. T. Burnite, 1718 State Street, Harrisburg, Pa., is secretary. H. H. Rhodes, of Middletown, Pa., is president. The annual dues are \$1.00. Quarterly meetings are held.

Information given by J. T. Burnite, M.D.

The Clinico-Pathological Society of Philadelphia, located at Philadelphia, Pa., was organized in 1894. There are now 108 members. The secretary is Joseph V. F. Clay, 2102 Chestnut Street, Philadelphia, Pa., and the president is W. R. Williams, 2010 Chestnut Street, Philadelphia. The annual dues are \$2.00. The meetings are held the first Thursday of each month at Hahnemann Medical College.

Information given by J. V. F. Clay, M.D.

The Hahnemann Club of Philadelphia was organized in 1872. There are nine members. Thomas S. Dunning, M.D., 1328 North Fifteenth Street, Philadelphia, is secretary, and John J. Tuller, M.D., 2104 Walnut Street, Philadelphia, is president. There are no annual dues. Funds are secured by assessments. Meetings held monthly as appointed.

Information given by Thomas S. Dunning, M.D.

The Hahnemann Round Table, 1703 Chestnut Street, Philadelphia, Pa., was organized November 24, 1906. There are 12 active members and 13 corresponding members. Ida Virginia Reel, of 4027 Spring Garden Street, Philadelphia, Pa., is secretary, and Margaret C. Lewis, 4027 Spring Garden Street, Philadelphia, Pa., is president. The annual dues are \$1.00. The meetings are held on the last Saturday of each month at 8.30 P. M., nine months of the year.

Information given by Ida Virginia Reel, M.D.

The Homœopathic Medical Society of the Twenty-third Ward, of Philadelphia, Pa., was organized in October, 1881. There are now 22 members. John D. Boileau, 804 West Lehigh Avenue, Philadelphia, Pa., is secretary. Edward Humphreys, 153 North Fifteenth Street, Philadelphia, is president. The annual dues are \$2.00. The meetings are held the third Wednesday of each month at the home of members.

Information given by John D. Boileau, M.D.

The Lackawanna County Homœopathic Medical Society is located at Scranton, Pa. There are now 20 members. Dr. F. G. Robinson, 110 Chestnut Street, Dunmore, Pa., is secretary, and Dr. J. L. Peck, 524 Vine Street, Scranton, Pa., is president. The annual dues are \$2.00. Meetings are held the second Thursday of each month at the office of Dr. H. B. Ware.

Information given by A. P. Gardner, M.D.

The Lehigh Valley Homœopathic Medical Society, located at Lehigh Valley, was organized in 1828. There are now 37 members. This society was reorganized in 1881. The secretary is S. C. Swartz, Allentown, Pa. F. P. Lefferts, M.D., Belvidere, N. J., is president. The annual dues are \$1.00. Quarterly meetings are held in various cities of the district.

Information given by S. C. Swartz, M.D.

The North Penn Homœopathic Medical Society, located along the North Penn Railroad, Montgomery and Bucks counties, was organized January 30, 1908. There are ten members. William G. Moyer, M.D., of Quakertown, Pa., is secretary, and S. C. Moyer, M.D., Lansdale, Pa., is president. There are no dues. Meetings are held at the homes of the doctors.

Information given by H. O. Williams, M.D.

The Oxford Medical Club of Philadelphia, was organized November 13, 1885. There are 18 members. Edward M. Gramm, M.D., 518 Perry Building, Philadelphia, Pa., is secretary, and J. A. Harrison, M.D., 512 West Erie Avenue, Philadelphia, is president. Nominal dues. Meetings are held monthly, usually at residence of members.

Information given by Edward M. Gramm, M.D.

The Schuylkill County Homœopathic Medical Society of Schuylkill County, Pa., was organized about 1882. There are now 30 members. F. M. Quinn, Minersville, Pa., is secretary and Earl Jones, Saint Clair, Pa., is president. The annual dues are \$1.00. Quarterly meetings are held at different places in the county.

Information given by F. M. Quinn, M.D.

The Society of Surgery, Gynecology and Obstetrics of Hahnemann Medical College, Philadelphia, Pa., was organized September 16, 1913. There are 44 members. William I. Tomlinson, 1823 Porter Street, Philadelphia, Pa., is secretary. Desiderio Roman, 1904 South Rittenhouse Square, Philadelphia, Pa., is president. The annual dues are \$2.00. The meetings are held at the Hahnemann Medical College, the Fourth Wednesday of the month at 8.30 P. M., October to May, inclusive.

Information given by W. I. Tomlinson, M.D.

The South Philadelphia Medical Association, south of Market Street, Philadelphia, Pa., was organized in 1910. There are now 16 members. The secretary is Jno. J. McKenna, 2038 South Seventeenth Street, Philadelphia, Pa., and the president is William I. Tomlinson, 1823 Porter Street, Philadelphia, Pa. There are no annual dues. Funds are secured by assessments. Monthly meetings are held the first Thursday at the homes of the members.

Information given by Jno. J. McKenna, M.D.

The West Branch Homœopathic Medical Society, located in the valley of West Branch of Susquehanna River, Pa., was organized September 4, 1907. There are 12 members. The secretary is W. H. Follmer, M.D., 325 Elmira Street, Williamsport, Pa. The president is J. M. Heimbach, M.D., of Kane, Pa. The annual dues are \$1.00. Meetings are held January and July at offices of members in the different towns.

Information given by W. H. Follmer, M.D.

The Women's Homœopathic Medical Club of Philadelphia, Pa., located at 1504 Locust Street, was organized November 5, 1883. There are 16 members. Ida Virginia Reel, M.D., 4027 Spring Garden Street, Philadelphia, Pa., is secretary and treasurer. Mary Branson, M.D., 1504 Locust Street, Philadelphia, is president. The annual dues are \$1.00. Meetings are held the first Tuesday in November, January, March and May at 8.30 P. M.

Information given by Ida Virginia Reel, M.D.

The Woman's Homœopathic Medical Association of Pittsburgh, Pa., was organized October 11, 1899. There are 10 members. Anna Johnston, 5016 Liberty Avenue, Pittsburgh, Pa., is secretary, and Mary D. Coffin, 716 Wallace Avenue, Wilkinsburg, Pa., is president. There are no dues. Meetings are held the first Thursday evening of each month at the homes of members.

Information given by Anna Johnston, M.D.

SOCIETIES COPIED FROM OLD LIST.

(Failed to reply to numerous inquiries.)

Homœopathic Medical Society of Lebanon County, Lebanon, Pa. Organized September 15, 1904. Number of members, 15. Secretary, F. E. Bamberger, M.D., 202 Seventh Street, Lebanon, Pa. President, William T. Bruce, Twentyninth Street, Lebanon. Annual dues, \$1.00. Time and place of meetings, bi-monthly on second Tuesday, except July and August. Annual meeting in June.

Homœopathic Pharmaceutical Association. Secretary, E. B. Anshutz, 1011 Arch Street, Philadelphia. President, J. F. Slough, Allentown, Pa. No meeting since last report.

Philadelphia Medical Club, Philadelphia. Secretary, Edwin H. Van Deusen, Vineland, N. J. President, Clarence Bartlett, 1437 Spruce Street, Philadelphia, Pa.

Berks County Homœopathic Medical and Surgical Society, Reading, Pa. Organized, 1895. Number of members, 16. Secretary, Margaret Hassler-Schantz, 402 North Fifth Street, Reading. President, W. F. Mark, M.D. Annual dues, \$1.00.

Homœopathic Hospital and Dispensary Association, 135

North Sixth Street, Reading. Organized, 1888. Number of members, 12. Secretary, Henry F. Schantz, M.D., 402 North Fifth Street, Reading, Pa. President, F. E. Howell, 220 North Fifth Street, Reading. Time and place of meeting, last Tuesday of each month at Homœopathic Hospital, Reading. Annual dues, \$2.00.

Philadelphia Society for Clinical Research, Philadelphia, Pa. Organized, 1905. Number of members, 18. Secretary, Frank J. Frosch, Philadelphia. President, Fred C. Emrey, Fox Chase, Philadelphia. Annual dues, \$6.00. Time and place of meetings, fourth Wednesday of each month, at home of members.

Homœopathic Medical Society of the County of Philadelphia, Philadelphia, Pa. Organized, 1866. Number of members, 308. Secretary, Norman Betts, M.D., Philadelphia. President, T. H. Carmichael, M.D., Philadelphia, Pa. Annual dues, \$2.00. Time and place of meetings, monthly, Hahnemann College, Philadelphia.

Homœopathic Medical Society of Erie County, Erie, Pa. Organized, 1893. Number of members, 12. Secretary, C. A. McNeill, M.D., 137 East Eighteenth Street, Erie. President, E. M. Gifford, M.D., 714 Sassafras Street, Erie. Annual dues, \$2.00. Time and place of meetings, public library, first Wednesday of each month.

William B. Van Lennep Clinical Club, Philadelphia, Pa. Number of members, 20. Secretary, John E. James, Jr., M.D., 118 South Nineteenth Street, Philadelphia. President, John J. Tuller, M.D., 2100 Chestnut Street, Philadelphia. Annual dues, \$2.00. Time and place of meetings, first Tuesday of each month, excepting July, August and September. Place arranged by member entertaining.

Luzerne County Homœopathic Medical Society, Wilkes-Barre, Pa. Organized, 1899. Number of members, 20. Secretary, O. K. Grier, M.D., 389 North Main Street, Wilkes-Barre, Pa. President, J. C. Bullard, 200 South Franklin Street, Wilkes-Barre, Pa. Time and place of meeting, every two weeks, Friday evenings, Wyoming Valley Homœopathic Hospital, 149 Dana Street, Wilkes-Barre.

Homœopathic Medical Society of Chester County, Pa., West Chester, Pa. Organized, February 8, 1898. Number

of members, 20. Secretary, S. A. Mullin, M.D., 29 South High Street, West Chester, Pa. President, Dr. Howard Terry, Phoenixville, Pa. Annual dues, \$1.00. Time and place of meetings, the second Thursday of January, March, May, July, September and November.

Pennsylvania Society of Physical Therapy, Philadelphia, Pa. Organized, 1902. Number of members, 25. Secretary, Walter C. Barker, M.D., 2820 North Girard Avenue, Philadelphia, Pa. President, J. W. Frank, 117 North Seventeenth Street, Philadelphia. Annual dues, \$2.00. Time and place of meetings, monthly in a suitable auditorium.

East End Doctors' Club, Pittsburgh, Pa. Number of members, 21. Secretary, C. I. Wendt, M.D., 600 Shady Avenue, Pittsburgh. President, W. F. Edmundson, M.D., 3509 Fifth Avenue, Pittsburgh. Annual dues, \$1.00. Time and place of meetings, monthly, at homes of members.

Euphron Club, Philadelphia, Pa. Organized, October, 1906. Number of members, 25. Secretary, G. Morris Golden, 1824 Venango Street, Philadelphia. Annual dues, \$2.00. Time and place of meetings, second Saturday of January, April and October, at such places as may be chosen.

The Homœopathic Medical Society of Chester, Delaware and Montgomery Counties, Pa. Organized, October 5, 1858. Number of members, 78. Secretary, F. W. Krusen, Boyer Arcade, Norristown. President, H. O. Williams, M.D., Lansdale, Pa. Annual dues, \$1.00. Time and place of meetings, bi-monthly, second Tuesdays; October in West Chester, April in Chester, others as selected.

Carl V. Vischer Medical and Surgical Society, Philadelphia. Organized, January 17, 1907. Number of members, 42. President, James H. Closson, M.D., 53 West Cheltenham Avenue, Germantown. Annual dues, \$10.00. Time and place of meetings, December, February, April, June and October, at Hotel Majestic, Philadelphia.

THE VALUE OF THE HOMŒOPATHIC REMEDY IN GYNECOLOGY.

BY

ALPHEUS GREGG, M.D., KENNETT SQUARE, PA.

I THINK I could amuse if not instruct you by reminiscing a little through my gynecological efforts of recent years, but if I must stick to the value of the homœopathic remedy in gynecology, I wish to say among them we can find relief; yes, cure, if we study our patients first and then find the remedy covering the totality of symptoms presented.

I could spend many times the time allotted me, enumerating the symptoms calling for the often used and proven valuable remedies, such as aconite, belladonna, pulsatilla, cimicifuga, helonius, and a score of other equally valuable but less frequently used remedies.

As my time is limited I must content myself with the mention of a few seldom thought of remedies in gynecological work, and say in them and many others we have a valuable asset for our gynecological sufferers.

Within the past month it has been my pleasure to cure Mrs. W., age 42, of menorrhagia with kreosote after two "old school" physicians had said a curettement was the only way of saving her life. I selected kreosote because of the great quantity of black blood with very offensive odor, that if the history had not been clear would have been suggestive of retained placental matter. I thought seriously of crocus for the above case.

I have practiced medicine since 1889, but recall no incident for need of curettement except following self-induced or some other form of criminal abortion, or following repeated and harmful efforts at prevention of conception.

I am such an enthusiastic student of *materia medica* as to think there could be found a remedy to correct a long-standing uterine displacement or repair a lacerated os or perineum, but I do believe if we, as homœopathic physicians, had the opportunity to observe and would study the individuality of our female patients there would be no displacements except in those so foolish or imprudent as a young lady patient of mine several years ago, who, after a straw ride stood upon the side

of a hay wagon and jumped towards the arms of a Romeo standing on the ground nearby.

Neither do I believe there is need for lacerations of os or perineum if we, as homœopathic physicians, had opportunity to give proper attention and treatment, except in those so unfortunate as to be deformed as to pelvis or to give birth to child with cephalic deformity.

Perhaps my colleague of today's subject can recall that some years ago he journeyed to Kennett Square with our lamented B. F. Bitts, and remember that the skillful gynecologist, after thorough and careful efforts, decided the wife of Mr. H. inoperable; yet today Mrs. H. enjoys good health, thanks to homœopathic *materia medica*.

Apocynum will often cure amenorrhœa in young girls for you, if the abdomen and legs are bloated, also excessive menstruation in young unmarried girls if the flow is clotted, the patient feeble when moved, fainting or vomiting when raising head from pillow.

Think of platina if there be painful pressure toward the genital organs, as if menses would make their appearance. In hydrastis we have the remedy if the discharge be like the white of egg with backache, headache and much irritability. Vaginitis, vaginismus, pruritis, vulvae and menorrhagia can and should be cured by the indicated remedy without resort to any local treatment, such as usually instituted by our brethren of the other school.

The same can be said of hysteralgia and dysmenorrhea. Here do not forget caulophyllum if the pains are neuralgic, sharp and cutting, reflecting from uterus to bladder, groins and lower extremities.

Davis of Chicago claims a little more than 50 per cent. of all cases of ovaritis follow anginal attacks during the menstrual period or immediately after tonsilitis and other throat affections. If this be true, and the other 45 or 50 per cent. gonorrhœal we have in our *materia medica* a prevention if not a cure for all ovaritis.

In cancer of the female organs we have so many remedies of great value, and hysterectomy, either vaginal or abdominal is so often disappointing that we should at all times be conversant with our *materia medica*, lest we allow our patients to suffer needlessly or meet an untimely death.

GUN SHOT WOUNDS OF THE ABDOMEN.

BY

W. N. HAMMOND, M.D., F.A.C.S., PHILADELPHIA.

GUN shot wounds of the abdomen are chiefly important because of the danger of perforation of some of the viscera or vessels, or because of the complications arising from the bullet having traversed the chest, pleura and diaphragm. The most frequent injury from this source in civil life is the revolver which shoots an unjacketed bullet ranging from 22 to 45 caliber. It is more or less deforming and is sometimes deflected and is very apt to lodge somewhere in the body.

On account of the usual short range, the bullet generally penetrates the abdomen and may carry in some part of the clothing or other foreign body.

It is often very difficult to determine whether the wound has merely penetrated the abdomen or whether it has perforated some of the vessels or viscera. When there is no perforation these wounds, as a rule, give few symptoms and, in fact, when there is a perforation of some of the abdominal contents, unless there is marked hemorrhage the symptoms are not alarming at first. It is a grave question whether we should delay exploration. If we wait in these cases, we often find when we do operate that we have to deal with a septic peritonitis and the patient's chances for recovery are very slight. When, however, there is a severe hemorrhage from a perforation of some organ or vessel of the mesentery, the symptoms are immediate and progress rapidly. There are always some symptoms of shock, depending upon the fright and excitement at the time of the shooting, but it is when severe hemorrhage occurs that we find profound and progressive symptoms of shock and collapse. An examination of the patient should be made at once, and while the patient is being prepared for operation, the bladder should be catheterized and the urine examined to determine if the kidney or bladder has been wounded.

We had one such case recently, in which there were symptoms of a severe hemorrhage. The urine analysis showed large quantities of blood and at the operation, we found that

the bullet had traversed the abdomen, with no harm to its contents, but had torn its way through the kidney, injuring it so much that a nephrectomy was necessary. The patient made a good recovery.

In another case the liver was badly lacerated and the abdomen was full of blood, and the patient very much shocked. He was operated on immediately. The hemorrhage was stopped by tamponade and the abdomen mopped dry, and a large pack placed in the wound of the liver. I think when the liver is wounded, the method of sewing the pack in place with catgut sutures is a good one, as it prevents the pack from becoming dislodged and consequent secondary hemorrhage.

These patients, when examined, usually complain of severe abdominal pain and there is at times, some distention and rigidity of the abdominal wall. The symptoms, however, are often not in proportion to the extent and seriousness of the intra-abdominal lesions and cannot always be relied upon in making the decision for or against exploration.

In a case operated this summer there were no symptoms except severe abdominal pain. In this patient, a man, 28 years old, a 32 caliber bullet had perforated the small intestine in four places within an area of four inches. He was operated about three hours after the injury. The abdomen was opened by a median incision, the perforations found and closed with Lembert sutures. In suturing the bowel, the lumen was very much narrowed but no ill effects followed. There was quite a good deal of blood in the abdominal cavity but no active bleeding. The blood was mopped away and drainage provided by an incision well over to the side, low down, and a drainage tube inserted. There was some discharge the first week, which gradually lessened in quantity, and later the wound was sutured around a small cigarette drain, which was soon removed.

With our modern methods of anesthesia, we add very little, if any, shock, and, while on the battle field, because of the lack of proper facilities and the less deforming tendency of the high velocity bullet, the conservative plan of treatment is probably best, still the mortality is high, and, to my mind, if the patient can be gotten to a hospital or other place where the necessary precautions can be taken against infection, the early operation gives the best chances of success.

The latest reports from the battle field, by Prof. Tuffier,

gives a high mortality for the patients who were transported any considerable distance and laporotomy performed, and especially when the small intestine was perforated.

Of the methods of choice, if the conditions are perfect and the patient brought into a well equipped hospital in reasonable time in charge of a skilled surgeon, laporotomy is always considered best.

When exploration is undertaken, it is necessary to search thoroughly but this should be done systematically, gently and as rapidly as possible, to avoid adding to the shock.

A median incision is usually best and the liver and spleen examined and, if found injured, should be repaired and the hemorrhage controlled. The stomach should be examined anteriorly and posteriorly, the pancreas and transverse colon should then be examined, and then, taking up the small intestine about the ligament of Tritz, it is carefully examined; next, the ascending, descending colon, sigmoid, rectum and bladder. The patient may be put in the Trendelenberg position while exploring the region of the bladder. The perforation should be closed by Lembert or purse string sutures, but should the perforations be very extensive, or if there is any doubt about the blood supply from the injury to the mesentery, that portion of the bowel must be resected. Drainage should be provided, and, as a rule, this is best carried out by a drain in the very lowest part of the pelvis, if necessary, making a suprapubic incision for it. If the perforations are all in the upper abdomen, I think a drain inserted from the side, or the lateral gutter, and carried to the posterior abdominal wall, will give good results. In very severely shocked cases, an intravenous infusion should be started at the time of operation, but in those where the shock is less marked, the axillary hypodermoclysis will tide the patient over.

CHRONIC CYSTITIS.—I. S. Stone (*American Medicine*, January, 1918) regards the administration of drugs by mouth as useless in this condition. If the urine is of high specific gravity it should be diluted by the free administration of water. The principle underlying the treatment of cystitis is to treat it as a local disease. At each treatment the bladder should be filled with hot normal saline solution or two per cent. boric acid solution. Two ounces of a one or two per cent. solution of protargol may be left in the bladder. Trigonitis requires special local applications such as five or ten per cent. silver nitrate solution. These should be applied through the cystoscope if possible.

THE HOMŒOPATHIC PRESCRIPTION.

BY

E. M. HOWARD, M.D., CAMDEN, N. J.

I PRESUME we will all agree in the assumption that in order to apply a drug according to the homœopathic method, it is required that we select one which is capable of producing a similar train of symptoms to that found in the patient for whom we are prescribing. The presumption is that the nearer this particular drug symptomatology approaches the exact similitude to the patient's condition, the better will be the chances for remedial relief, providing always, however, that the causes of such deviations from health are of diverse origin. We are discussing a *similar* not an *idem* proposition.

The problem confronting us is, how best to determine this similitude; by what method can we most certainly and quickly pick out the drug that is the nearest similitum.

The main difficulty, of course, lies in the existence of an enormous and constantly increasing volume of drug symptomatology, so vast already as to be beyond the power of any man to memorize. The very magnitude of the contents of this storehouse appears to be the chief stumbling block to those who desire to utilize it, and it is the mountain of difficulty that discourages outsiders who might otherwise seek to investigate homœopathic methods and claims. This difficulty has been appreciated from the beginning, and Von Boenninghausen very early produced his repertory in an attempt to furnish an index to this accumulation of facts and so help to solve this problem. Numerous other attempts have been made from time to time and a number of notable repertories have been published.

Quite a number of men have developed special repertorial methods of their own for arriving at results, and have carried them to such a high degree of perfection that they have highly magnified their value and usefulness. Indeed, repertorial analysis has come to be considered by some as the only true way for the selection of drugs for curative purposes, and their habitual use is even considered to be the real criterion of a true homœopathic practitioner.

To the majority of our school, the repertorial methods do not appeal to any great extent, and while they do admire the intelligent thought and labor which has entered into their perfection, many men infrequently or never make use of them.

Some of the reasons for this attitude, it is desired to point out and discuss:

In the first place, the material embraced in the repertories is open to criticism. The symptoms recorded do not represent a *pure* drug symptomatology. The only work of this kind that does aim to do so is "Allen's General Symptom Register of Pure Materia Medica," and this is seldom or never used by those who depend mostly upon repertorial methods. It is the most reliable index ever produced and contains everything positively known up to the date of its publication, including some alleged pure drug effects that have been criticised, and yet it is not popular with repertorial users.

All other repertories include material obtained from clinical and other sources, notably symptoms that have disappeared after the administration of a drug, which effect may or may not have been due to the action of the drug supposed. Such symptoms mixed without ear-marks indiscriminately with known pure drug effects, are not reliable data, upon which to hang the issues of life and death. Such records may be useful and ought to be preserved. Their value as pointers of possible drug action may be great, but their real status must be determined largely by the surroundings and circumstances under which they are observed. Surely, their use as the basis of a prescription is dangerous and uncertain.

By far, however, the greatest objection to the repertory as the *sole* basis for the selection of drugs, is its isolation of the symptoms. Single symptoms torn from their surroundings and from the conditions under which they have occurred, may easily be wrongly interpreted, and their relative importance be overestimated. In the repertories symptoms are graded by some system arbitrarily adopted by each author and classified according to their quality and supposed importance. For instance, in Jahr's and Possart's repertory symptoms printed in ordinary type are ordinary pathogenic symptoms not yet confirmed by practice. Those in italics are symptoms observed in several provers, or clinical symptoms which dis-

appeared during treatment (as noted above). Capitals are reserved for, first, pathogenetic symptoms confirmed by clinical experience, and second, for those which have yielded to treatment without being pathogenetic symptoms (also referred to above).

All such classification is redolent with human possibility for error. It is evident, therefore, however valuable may be the helpfulness of the repertorial analysis, that it is based upon questionable data and is not comparable, as has been so forcibly claimed, with the analytical methods of chemistry and other sciences, which do have a strictly scientific basis.

The numerical preponderance of the appearance of a drug in a repertorial analysis has been much counted on. This does not, however, always measure the degree of similarity, because it does not take into account the relative importance of each symptom to the particular case being studied. There is indeed a natural reluctance upon the part of most men towards the general acceptance of mere numerical data as the arbiter of prescription discussions. We instinctively rebel at the mathematical result, and recognize that one cannot properly estimate the relative value of the symptoms which may appear with such frequency in any individual case.

Medical treatment is an art and not a science. Though it is founded upon science, it cannot be reduced to a mathematical certainty. It requires the broadest kind of knowledge and conception of the capabilities of drugs, and can never be governed entirely by a mere numerical preponderance of symptoms. We do need the use of repertories as indexes to hunt up rare and unremembered peculiarities, but final selection of a drug demands far more than mere frequency of repetition or even the presence of queer and unusual conditions, valuable though these may be. It requires a broad knowledge of the general action of the drug, and an appreciation of the real spirit or gist of its power.

While no man can master the details of its symptomatology, or should even try to do so, every physician must strive to know the unique features of each individual drug, to define its sphere of action, its range of physiological processes influenced, and the real characteristic individuality it possesses. Much of this is consciously or unconsciously acquired by every homœopathic student and physician, and made use of

without apparent reference to its source or knowledge of its possession. This is the explanation of the so-called intuition of the experienced practitioner, who sees at a glance the needed or indicated remedy. This power is the result of his accumulated knowledge and experience and is not based upon fancy or any occult possession, but is the result of his study and unconscious accumulation of facts about medicine. This is the kind of *materia medica* knowledge that it is possible to obtain and utilize and should be the aim of every physician to acquire, and must be the foundation of all effective homeopathic prescribing.

There is no royal road, or short method, for acquiring skill in homeopathic prescribing. If it could be reduced to a mathematical basis, or be certainly and surely done by simple repertorial analysis alone, it would need no general medical knowledge to perform it, and could be accomplished by any person of ordinary ability.

No, a working knowledge of *materia medica* must be learned laboriously one drug at a time, each drug studied until its action is well understood in the light and in the terms of modern pathology and physiology, and when once so fixed, it is not liable to ever be forgotten. Every case to be met should be studied in the same thorough manner. I have no patience with the idea that there is no need for the use of the information required for a proper diagnosis in order to prescribe intelligently. There is no symptom or discoverable condition that should be omitted in our survey of a case. We may not heed all the minute details of the patient's peculiarities in order to make a diagnosis, but we do need all possible diagnostic data as well as the finer characteristic symptomatology to make our prescription. A case properly taken will include all of the data required for the diagnosis, as well as those usually used in making the prescription. The whole must include all of the parts. Some data may be more valuable for one purpose than another, but all are necessary for a true picture of the case. We have neglected the known physiological and pathological side too much, in our emphasis upon the subjective symptomatology, and the time has now arrived when we must take into account all the possible known pathological and physiological data, both in the making of our prescriptions and in the perfectment of our provings.

When a case has been studied in this thorough manner, the physician is prepared to practice his art, and prescribe the most similar remedy, which is likely to lead to a cure. I do not believe any drug will cure a case unless it is capable of producing a similar pathology to the one under consideration, even if it does happen to produce the most characteristic or peculiar symptom or even some of the marked modalities that is presenting. While a presumption exists that such symptoms must lead to a drug which will cure, it may be possible, however, that such condition has been produced in a different way having a different physiological basis. This is one fallacy of the repertorial analysis and may explain some of our failures. Such peculiar symptoms may, and generally do, direct the prescriber in the right direction, but must sometimes be ignored in summing up the grand total of the nearest symptom similarity.

For the selection of the most similar drug, I have seen as yet no suggestion better than the method used by Hahnemann himself, and thoroughly explained and illustrated by him in his *Materia Medica Pura*, Vol. I, Preamble. It is herein shown that he took up each striking symptom in his case, considered it in all its relationships, compared it with other drug effects of similar import, and when he had summed up such study he had arrived at a very definite decision as to the drug or drugs that should be used in accordance with the law of similars in this particular case.

No better way has been discovered up to the present time. We must welcome any method that will assist our memories. We do need, and must use, a repertory of some index for the location of unusual and unfamiliar symptoms, and the finding of special groupings and relationships, but such index must be true to facts. We need all other helps possible, but the final decision must be based upon an intimate knowledge of the sphere of action of the drug and calls for the highest type of medical ability for its most successful application.

We have no right to set up any particular method of selection of drugs and claim it as the only homœopathic way, or make it the criterion of pure homœopathic practice. It is a disgrace that any man should call another a mongrel, because his methods are different. Any man who selects his drug according to his conception of the most similar remedy,

and administers it to the sick, is practicing homœopathy, no matter by what method he arrives at his conclusions, nor, I might also add, no matter what strength of drug he may think best to use.

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| Allen's Symptom Register of Pure Materia Media. | Von Boenninghausen's Repertory. |
| Jahr's and Possart's Repertory to Manuels. | Coughs: Especially Whooping Cough. |
| Kent's Repertory. | Constantine Lippe's Repertory. |
| Knerr's Repertory of Guiding Symptoms. | Boge's Repertory of Antipsorics. |
| Bell's Therapeutics of Diarrhea. | Grigg's Illustrated Repertory. |
| H. C. Allen's Therapeutics of Fevers. | Douglass' Repertory of Tongue Symptoms. |
| Lee and Clark's Cough and Expectoration. | Hart's Repertory of New Symptoms. |
| Lutz's Neuralgia with Repertories. | Gentry's Concordance Repertory (six volumes). |
| Van Denburg's Therapeutics of the Respiratory System. | Ruecket's Repertory. |
| Morgan's Repertory of the Urinary Organs. | Snade's (Henry) Repertory. |
| Lee's Characteristic Conditions of Agr. and Amel. | Curie's Repertory. |

**REPORT OF CONGRESS ON MEDICAL EDUCATION, HELD AT CHICAGO,
FEBRUARY 2 TO 5, 1918.**

BY

WILLIAM A. PEARSON, DEAN OF HAHNEMANN MEDICAL
COLLEGE, PHILADELPHIA.

The first meeting was of the homœopathic members of the Federated State Boards which convened at 2 o'clock, Sunday afternoon. Dr. I. D. Metzger is chairman, and he outlined the purpose of the meeting by calling attention of the members to the responsibility each had in protecting the hom-

œopathic physicians in their respective States. He said that all homœopathic schools must rank in the highest class in order that no criticism be made of homœopathic physicians.

Dr. Metzger called attention to the wide scope of duties belonging to the State medical boards. Examination of hospitals, colleges and all kinds of medical training must be inspected as well as examining medical graduates.

Dr. C. E. Sawyer proposed that two classes of doctors be trained and licensed, one for general practice, the other as specialists and consultants. He said it was our first duty to provide good homœopathic doctors and insist upon this through federation of State boards. He called attention to the need of more doctors and that the country now has more quacks than ever before. Some of the poorly trained cults have members who would have studied medicine if they had had an opportunity.

Dr. Gilbert Fitzpatrick, in discussing this paper, said that the best way to get more doctors was to interest the homœopathic physicians in sending them to our colleges.

Dr. G. M. Cushing, of Illinois State Board, spoke on "Board Member's Duties." He said that boards should aid colleges and proposed that all colleges be required to have sufficient endowment so that the income from endowment is twice that of students' fees. He explained the new Illinois law and said the board had provided for practical laboratory examinations.

Dr. G. L. LeFevre, of Michigan, in discussing this paper called attention to the other duties of State boards besides examining students. He favored State boards inspecting all colleges and classifying them in two classes—satisfactory and unsatisfactory.

Dr. J. P. Cobb presented a paper on "Duties of State Boards With Regard to Our Profession and Institutions." He told of the necessity of having strong, loyal homœopathic physicians on our State boards, and called attention to the necessity of these men being active members of local, State and national homœopathic societies.

Dr. Scudder, Dean of Cincinnati Eclectic College, said that much reform must come through the assistance of homœopathic and eclectic physicians on State boards and that a

reasonable standard should be insisted on and all criticisms be constructive and not destructive.

Further discussion on the general subject was made by several homœopathic and eclectic physicians, all agreeing that closer and more active co-operation be followed. Because of this free discussion the meeting between the homœopathic and eclectic physicians was not held this year.

A joint meeting of College Alliance and Council of Education of the American Institute of Homœopathy was held at 4 o'clock Sunday.

Dr. Dewey, secretary of Council of Education, read a report, showing the marked activities in inspecting homœopathic colleges and read much interesting correspondence he has had with various State boards (medical). He showed that some State boards were illegally constituted, because of not having the required number of homœopathic physicians, and that some of the so-called homœopathic physicians were not members of their local, State and national organizations and thus were not proper representatives.

The correspondence with several State boards in regard to recognizing certain homœopathic colleges has resulted in much good as several State boards have agreed to admit students to examinations who had formerly been refused this privilege.

The marked improvement of several homœopathic colleges was reported.

Another meeting of the College Alliance was held Sunday evening at which the deans of all the nine homœopathic colleges were present. Several hours were spent in going over the details of the standards for preliminary requirements proposed by the Federation of State Boards. Certain changes were suggested and sent to the committees. The following officers were elected:

President—Dr. J. P. Cobb.

Vice-President—Dr. W. A. Pearson.

Second Vice-President—Dr. C. A. Burrett.

Secretary-Treasurer—Dr. C. A. Brant.

On Monday morning the meeting of the Council on Medical Education of American Medical Association was attended.

Dr. Colwell read his report which showed that practically

all of the medical colleges have now come up to the standard set a few years ago and that since 1904 the number of medical colleges had been reduced from 165 to less than 100. He did not suggest how more physicians will be supplied at this critical time.

Prof. George Gailey Chambers, Director of Admissions, University of Pennsylvania, read a paper on "Problems of Administering Entrance Requirements." He said that fitness to study medicine was, after all, the best criterion. He showed that the required subjects could be taken in a single year but that the second year was needed for culture. He approved the seven year combined course and thought that any attempt to reduce the time required would result in physical danger to students. He said education was in an experimental stage and suggested a national commission to pass on entrance requirements and suggested a common blank form for all.

President Thompson, of Ohio State University, in discussing this paper, said that it was impossible to make a cultured gentleman in one year, but that it did no harm to cultivate him.

Dr. J. M. Dobson, Dean of Rush Medical College, said he considered non-medical work essential as medical men must be broad gauged. He said that he was surprised to see how many students only took the minimum requirements of two years' preparatory training instead of full course. He urged that these men get more cultural subjects in summer schools.

Dr. George Dock, of Washington Medical School, gave an excellent paper on, "The Students' Course in Medicine." He proposed more individual instruction with co-ordinated laboratory work.

Major H. D. Arnold, of the Surgeon General's Office, gave an excellent paper on, "Some Problems in Medical Education Resulting from the War." The medical men needed for our present army of 1,500,000 has been obtained but many more medical men will soon be needed for a much larger army. Many of the physicians who are now in the Reserve Corps are inefficient and are being rapidly discharged for incompetency while many more are being trained for special service. He regretted that the supply of good physicians is inadequate and suggested that medical colleges remain open during the sum-

mer in order that the present students may be available at an earlier date.

It is not desired to make the course of instruction any less extensive but foresight is necessary in order to prepare more physicians for duty as soon as possible.

The fact that nearly all medical students are now under Government control relieves the colleges of any power of decision in the matter but the opinion of medical educators was requested as to the value of the work that could be done during the summer months. Major Arnold called attention to the fact that every one in the army is now working up to his limit every day and it is not unreasonable to expect every one else to do the same, especially the medical students who should not be permitted to lose valuable time in preparing to take proper care of our soldiers. The question of the students finances was considered and Major Arnold was of the opinion that very few students would be compelled to drop their work on this account as they should be able to borrow the money, if necessary, on the fact that a position at \$2,000 per year is waiting for them as soon as they are graduated.

Dr. Baldy said that military training was now a necessary requirement in Pennsylvania and called attention to the Pennsylvania law which required all medical courses to be given in different calendar years. Major Arnold said that medical students were now in the service of the Government and that in due time Pennsylvania would, no doubt, take proper care of her sons.

The subject was discussed for two hours and Major Arnold said it made no difference what resolution was passed he had simply asked for the opinion of the medical educators and would report to the Surgeon General that there was a great difference of opinion in regard to keeping the medical colleges open this summer.

The Association of American Medical Colleges had two sessions on Tuesday.

The report of the Executive Council caused prolonged discussion on standards and war needs.

The University of Southern California Medical College was suspended from membership for one year because of certain improvements that have not yet been made. This college will be re-instated next year if these improvements are made.

The Hahnemann Medical College of Chicago applied for membership in the Association of American Medical Colleges and was duly inspected and found to be in good condition, except for certain additional requirements that can easily be complied with. It was decided to defer membership for one year and if these changes are made to recommend election next year.

Lowering entrance requirements during the war was strongly opposed.

Major Arnold said that the United States is the only country where medical education is now being properly carried out, and it is imperative to keep our medical schools in good condition and plan to educate physicians not only for our needs but also for other countries. Plans for post-graduate work must also be made.

General Gorgas has "Provisionally approved the plan of keeping medical colleges open this summer providing that the standard is not lowered." There is no reason why four college years cannot be given in three calendar years. Colleges must prove that they are using time to best advantage, must work with efficiency and train competent men. Every medical man will be needed either in war or peace. Now is the time to act.

Dr. Wilson, of Rochester, showed that the idea is practical and said that 4,000 hours of medical instruction can be given in three calendar years by working only six hours each day and that this amount of work will not physically harm the twenty-five year old students of our medical colleges. He recommended the Junior High School as a means of getting younger medical students.

Dr. Bradford, Dean of Harvard Medical College, advocated special courses in our Medical Colleges for military needs. A review course near end of the fourth year on treatment and diagnosis of common diseases, because young doctors must know how to recognize and treat measles. He advised reduction of requirements in physics from 8 to 6 hours and that work in chemistry include qualitative, quantitative analysis, chiefly volumetric, organic chemistry and physical chemistry.

President Thompson, of Ohio University, called attention to difficulty of universities giving this special preparation for medical students.

The greater importance of teaching than research was mentioned.

Dr. Phillips mentioned the need of exempting preparatory medical students.

Revision of by-laws of Association of the American Medical Colleges was considered, and it was decided to print the proposed new by-laws and send to all members, so they can be properly considered next year.

Dr. William S. Carter, president of association, read his report. He urged closer co-operation between pre-medical and medical education. He considered combined courses necessary and recommended them. The aim of medical colleges is not to make specialists but medical practitioners.

Dr. J. Van de Erve, Marquette University, made a plea for more practical teaching with personal attention given to each student.

Dr. French, North Dakota University School of Medicine, gave some interesting data on students who had carried conditions into medical years. His data show that students with conditions do as satisfactory work in medical subjects as those who do not.

It was impossible for me to attend the meetings of the Federation of State Medical Boards because they were held at the same time as the meetings of the Association of American Medical Colleges.

Dr. Sawyer proposed that two grades of doctors be licensed as a war measure and this produced long discussion and in the end nothing was done.

Dr. Dowling, of New York, explained the New York law which requires all students to have physics, chemistry and biology in high school as well as in college. He said that many colleges give courses in science of high school grade.

Dr. Dyer gave a report of examinations held by National Board of Medical Examiners, and said that examinations would probably be held at medical training camps. He advised the establishment of a National Service School which would take students after two years of work in medical colleges and give them three more years of training, which would be especially valuable for men who will go into military medicine.

The *Bulletin* of Association of American Medical Colleges will be revived. There are sixty-two members of Asso-

ciation of American Medical Colleges; two honorary members (Navy and Army School), one associate member, fifty-six Class A colleges; three Class B colleges. Five colleges in China have formed a similar organization.

Dr. Means was elected president, Dr. Bradford vice-president, and Dr. Zapfee secretary and treasurer.

Besides the regular stated meetings attended I was a guest of Chicago Homœopathic Medical Society on Monday evening, and of the faculty of Hahnemann of Chicago at Union League Monday noon. Many problems were talked over with able men. Several of the homœopathic colleges may follow Dr. Lee's suggestion and have campaigns for obtaining endowments.

The Hahnemann Medical College and Hospital of Chicago may start a campaign for \$1,500,000. This college has made many improvements in the last few years and no doubt deserves a Class A rating. It is now on a substantial financial basis and the trustees have pledged themselves to furnish \$12,000 per year for the next five years. The alumni of this college contributes \$6,000 a year to the support of the college.

OCCUPATION IN THE TREATMENT OF PULMONARY TUBERCULOSIS.—J. R. Byers (*Canadian Medical Association Journal*, January, 1918) comes to the following conclusions: Properly regulated work is highly beneficial to the sufferer from pulmonary tuberculosis, provided that the greatest care has been exercised in the selection of the work as adaptable to the patient, and that the patient cooperates willingly. Even patients who are confined to bed seem to progress more rapidly when allowed to fill out part of the day with some interesting finger work, instead of lying still and brooding over their lot. Contrary to expectation, relapses have been less than two per cent. among the patients thus treated under the writer's care, and in a year there has been only one small hemorrhage following exposure to the workshop. While the vocational training does not make a man a wage earner in a new field, it has in many cases started new lines of thought regarding the life to be led after discharge, and stimulated not a few patients to improve themselves and become more useful citizens. Occupation has improved the morale of the men remarkably. While the results of treatment do not show any marked change from those obtained in civilian sanatoriums, they are decidedly better than those obtained during the first year of military work. A comparison of the large percentage of men who refused treatment last year with the very small number now applying for release furnishes strong evidence that the men appreciate this method of loosening nervous tension and making the prolonged and tedious treatment bearable. Finally, Byers maintains that a fourth word should be added to the code for the treatment of pulmonary tuberculosis, which would then read—rest, fresh air, good food, and work.

EDITORIAL

CO-EDUCATION AT HAHNEMANN MEDICAL COLLEGE.

FOR some years back there have been suggestions made from time to time that Hahnemann Medical College of Philadelphia, open its doors to women who desire to fit themselves to become homœopathic physicians. For various reasons the faculty have not, in the past, deemed it advisable to alter the former policy of the institution and admit women to the medical course. During the past year, however, new conditions have arisen which render a reconsideration of this question necessary, and there appears to be, amongst those who have given the matter thoughtful consideration, a growing sentiment in favor of co-education at Hahnemann.

This change in attitude arises in part from the fact that women are taking such an active part in social service, sanitary work, laboratory research, and other work of a medical character, arising from our present military situation, and it would seem no more than fair that they should be given every opportunity our educational institutions offer to train themselves as thoroughly as possible in order to carry out their work effectively. There remains very little of the old attitude that would deny a woman the opportunity to fit herself for efficient service merely because of her sex, and no progressive institution could afford to take a position that is so out of accord with the spirit of the times.

Entirely aside, however, from the question of sex, there are many who favor admitting women students of medicine to Hahnemann College because of the pressing need of physicians and especially of homœopathic physicians. The laws regulating medical education in the various states, which have been urged upon legislators by a small group of professional educators, have long since passed the bounds of reason, and it has become evident that it is practically impossible to secure an adequate supply of men who will devote seven years to the study of medicine, as the law in Pennsylvania for example, now requires. As a consequence of such impractical and unreasonable demands, the nation, in this

great military crisis, finds itself seriously handicapped by the lack of competent medical men for service in military and in civil practice. And yet, despite the fact that we have only as yet begun to feel the effects of this shortage, which in the course of the next three or four years will become extremely acute and affect the welfare of every soldier and of every civilian in the United States, no rational or effective measures are being taken to better matters, and the fear of being indicted as an advocate of "lowering the standard of medical education," deters even the boldest from demanding or even suggesting changes which every reasonable man knows in his heart are absolutely imperative. In view of the fact then, that no such changes are likely to be made in the medical laws as would encourage competent men to enter upon the study of medicine in sufficient numbers, we must depend, to a large degree at least, on filling up the ranks of the profession in the future with women. These facts apply with especial force to our homœopathic institutions and we believe this constitutes a very important reason for admitting women to the Hahnemann Medical College of Philadelphia.

It is, of course obvious, that in thus broadening the policy of the institution and increasing the number of students, certain new facilities would have to be added and certain new expenses incurred. It therefore seems both necessary and fitting that if such a change is made, the women of our State and particularly the members of the Woman's Homœopathic League, should make an effort to secure an endowment fund to carry on this work. We believe that a step of this character would remove the only possible objection that could be raised to co-education in Hahnemann College of Philadelphia and that the inauguration of such a policy would open up an era of new development in "Old Hahnemann." G. H. W.

MENINGOCOCCUS CARRIERS.

DURING the past winter a surprisingly large number of cases of cerebro-spinal meningitis have developed among the members of our civil and military population and, consequently, a great deal of attention has been paid to the question of how the disease is transmitted from one individual to an-

other. The United States Public Health Service has published a very interesting report on the subject which emphasizes the fact that the meningococcus has never been found in nature outside of the human body, so that it is considered practically established that the organism is transmitted directly from one individual to another. A large proportion of cases have developed in individuals who have not been in contact with persons actually suffering from meningitis and, until it was found that a considerable group of individuals in apparent health harbored this organism, we were at a loss to understand how the disease spread.

These meningococcus carriers may be divided into three classes: (1) Individuals who are convalescent from an attack of the disease, (2) Persons who have been in contact with patients suffering from meningitis, and, (3) Persons who can be shown to have had no previous contact with the disease.

The organism is most frequently found in the naso-pharynx and is probably disseminated by sneezing or coughing and in this way finds its way into the mucous membrane of a normal individual. The length of time that an ordinary individual may harbor the organism varies from a few weeks to a few months. These carriers can only be discovered by making a culture directly from the naso-pharynx and placing the culture tube in the incubator as soon as possible after making the smear.

The treatment of meningococcus carriers once they have been discovered consists in keeping them in the open air as much as possible and out of contact with healthy individuals. In addition to the open air treatment, Dunham and Dakin have suggested cleaning the nose with a saline solution and then spraying with an oily solution of dichloramin—T. This treatment should be applied about four times daily for a period of about two weeks. It has been found in this way that the naso-pharynx may be rendered sterile permanently and it seems probable that by prompt isolation of active cases of meningitis and by a careful search for and treatment of meningococcus carriers, the number of cases of cerebro-spinal meningitis can be very materially diminished.

G. H. W.

GLEANINGS

A STUDY OF EXOPHTHALMIC GOITRE FROM THE POINT OF VIEW OF THE BASAL METABOLISM.—In the *Journal of the American Medical Association* of July 7, 1917, Means and Aub reached these conclusions:

1. The general metabolism shows a characteristic increase in hyperthyroidism.

2. This rise may be used as a functional test of the thyroid activity or as an index of the intensity of the thyroid intoxication.

3. An extended study of the metabolism in various types of toxic goitre shows that:

(a) Rest alone usually causes a marked decrease in toxicity.

(b) Drugs in addition to rest do not materially accelerate this decrease.

(c) The Roentgen ray, in some cases, produces a definite improvement, while in others it seems to be quite without effect.

(d) The usual immediate effect of surgery is a marked decrease in toxicity, but there is a very definite tendency toward a subsequent recurrence.

4. The lesson in therapeutics to be drawn from these results they believe to be about as follows:

(a) Complete rest in bed plus irradiation should be continued until the metabolism reaches a level.

(b) If rest and the Roentgen ray fail to restore the metabolism to within 20 per cent of the normal, it is proper to resort to surgery, unless there is some definite contraindication. Among contraindications a rising metabolism, in spite of complete rest, seems to be very important.

(c) Following operation, if the metabolism again increases, further active treatment should be carried out. The observations in the cases that the writers have followed for a long time emphasize the importance of keeping cases of exophthalmic goitre under observation for months rather than weeks, and preferably years rather than months.

ACIDOSIS IN INFANCY AND CHILDHOOD.—The *Archives of Pediatrics* for July, 1917, contains an article by A. D. Smith in which he says the treatment should be directed toward neutralizing the acid intoxication, alleviating its symptoms, and removing the predisposing conditions. This consists in keeping the patient in bed and as quiet and free from excitement as possible, the administration of alkalis by mouth or rectum, catharsis, rectal irrigation, and diet.

Sodium bicarbonate given by mouth should be well diluted, and when so given is retained in the majority of cases. The dilution should be at least 1 in 30, and frequently weaker dilutions up to 1 in 60 are better. If 1 drachm is given each hour the urine will become alkaline in twenty-four

to thirty-six hours. Potassium and sodium citrate are alkalies of second choice. They may be given $\frac{1}{2}$ to 1 drachm every hour in a concentrated solution, 1 ounce of salt to 4 ounces of water. The administration of the alkali should be continued a few days after the subsidence of the acute symptoms.

The combined use of sodium bicarbonate and lactose is considered by some to be more effective than soda alone. Smith's experience leads him to corroborate this view. When used in this way the soda may be given every two hours, alternating with the lactose solution. This medication is much more effective when given by mouth.

For the prompt and thorough emptying of the intestines 1 grain of calomel in divided doses, followed by milk of magnesia, or citrate of magnesia, may be used. A large enema of normal saline or soap-suds given as high as possible also helps in emptying the intestines.

Even in the absence of vomiting it seems a rational procedure to stop all food until medication has been given for a few hours. If vomiting is present even liquids, except in extremely small quantities, should be withheld until it stops. A little cracked ice or diluted brandy and cracked ice may be given. When food is commenced a barley lactose solution is a good stepping-stone to more food. After this Smith begins with a food low in fat, such as skimmed milk with or without lime water, and then adds rice water, oatmeal water, orange juice, grape juice, cereals, crackers, toast, and broths. Proteids can be used in the form of casein, gelatin, soy-bean flour.

PHYSIOLOGIC ACTION OF OLIVE OIL.—In the *Proctologist and Gastroenterologist* for June, 1917, Asnis states that the diseases of the stomach that are benefited by the use of olive oil either alone or in combination with other drugs are as follows: (1) Hyperacidity, no matter what its origin; (2) erosion, fissures, and ulcers; (3) pyloric spasm, no matter what its cause; (4) diseases of the biliary tract, such as cholecystitis, and Asnis ventures to say cholelithiasis in a limited and selected number of cases; (5) certain types of diarrheas and dysentery, constipation, dilatation of the stomach due to pyloric spasm, ulceration of intestines, malnutrition.

As to hyperacidity, most investigators agree that oils decrease secretion of hydrochloric acid, although it is not clear how this inhibition of gastric secretion operates, Pawlow believed that it is due to reflex stimulation of the inhibitory center of the nerves, while Munson claims that the action is purely mechanical; but that it does inhibit the flow of acid gastric juice is not disputed.

Given a case of hypersecretion with hyperacidity, olive oil in Asnis's judgment has more advantages, everything being equal, and less counter-indications, than any of the standard remedial agents used. It does not constipate like bismuth salts. It does not have to be watched as closely as the use of belladonna or atropine. Silver nitrate and its other salts are of little use in the usual small doses given, and the dangers of argyria are certainly not to be forgotten when larger and continuous doses are resorted to. Alkalies, such as sodium bicarbonate, magnesia salts, only neutralize and at best are only of temporary benefit. It seems to Asnis therefore that the omission of olive oil in hyperacidity and hypersecretion, and even in hypermotility, is at best incomplete therapeutics.

Because hydrochloric acid has no effect on the olive oil, and because of all foods it remains longest in the stomach, hence as a lubricant and as a protective agent it is unexcelled.

Given a fissure, erosion, or ulcer of the stomach, what are its pathologic manifestations, and to what are they due? The most important clinical symptom is pain. The pain is due to two factors, namely, secretory and motor. The secretory factor is the constant irritation of the acid juice upon the eroded, fissured, or ulcerated area, thus keeping the ulcer actively engaged. The motor factor is the irritating and stimulating action of the erosion, ulcer, or fissure on the muscular ring of the pylorus—thus producing a pyloric spasm. The healing of the ulcer, erosion, or fissure is also prevented by the spasmodic contraction of the pyloric ring. Here again two active factors are concerned in keeping the injured mucous membrane from healing—the chemical action of the acid and the physical action of the musculature.

In view of the pathology and of the clinical symptoms the medical treatment demands a drug that will reduce the irritating factor, namely, the hydrochloric acid, protect the injured mucous surface, and overcome the pyloric spasm. Here again the demonstrated physiological action of olive oil is of exceeding value. By its use almost all of the symptoms can be more or less overcome because of its antacid, protective, and antispasmodic or relaxant effect on the sphincter pylori. In addition it not only acts as a drug alleviating those symptoms, but also as a food and laxative, which factors not infrequently demand our attention.

Again, olive oil is devoid of the numerous contraindications encountered in drugs used to overcome these symptoms.

Since gastric ulcer is the symptomatic expression of pyloric spasm, hyperacidity, and dilatation, and is the result of increased hydrochloric acid on a less resistant gastric area, no other drug or drugs can fulfill all the indications in the treatment of this disease except olive oil. Its action is purely local, and is altogether devoid of the cumulative effects characteristic of certain drugs used in treatment of this disease. Pyloric spasm, its significance and the rôle it plays in gastric symptomatology, Asnis fears is not thoroughly appreciated. It is a symptom or condition met with in several diseases of the stomach and is due to some irritant, whether local or general, and not infrequently dilatation of the stomach may be a result of persistent and prolonged pyloric spasm.

In the vast majority of instances the causative factor is of local nature, and the use of olive oil is far more desirable than any known anti-spasmodic.

To mention olive oil in the treatment of gall-stones, especially in the presence of surgeons, is to tread on dangerous ground and to invite trouble; however, Asnis will venture to explain the action of this drug, and the grounds upon which claims for its use in certain cases are justified.

The mere mention of olive oil in the treatment of gall-stones, almost with no exception, is met with a sneer of ridicule. Part of this, Asnis admits, is well deserved. The extravagant claims by well-meaning physicians and the ridiculous claims by quacks and imposters are certainly responsible for the undeserved abuse, but aside from that there is a plausible physiologic explanation for the possible benefit of its use in gall-stones.

The clinical symptom of gall-stones and colic is pain. The pain is due to the distention of the gall-bladder consequent on the impaction of the stone in the neck or duct of the gall-bladder, and is also caused by the irritation and consequent contraction of the impacted area on the gall-stone.

The use of large doses of olive oil in preference to morphine is justifiable on the following physiologic explanation: As soon as the oil enters the duodenum it splits up into glycerin and fatty acids. Part of the glycerin acts locally, reducing turgescence of the biliary duct. Part of the glycerin is absorbed and reaches the liver, and here acts as a direct stimulant, producing an abundant flow of watery bile which may wash and carry small stones through the duct. When the stones are larger, the local action of the glycerin, acting in the presence of large quantities of bile, causes a change of position of the stone, and a free passage is opened for the flow of this watery bile, thereby removing the impacted stone from its surgical position, and relieving the tension of the gall-bladder.

Rutherford, of the medical department of the U. S. Army, who had under his charge a large number of cases of diarrheas and dysentery contracted by soldiers in the Philippines and treated at the U. S. Army Hospital at San Francisco, makes the following statement: (1) Olive oil increases the flow of watery bile. (2) The liquid bile acts as an intestinal antiseptic, promotes absorption of fat and acts as a local sedative, reduces putrefaction and fermentation, and there is a general gain in weight and strength of the patient.—*Therap. Gazette*.

PRACTICAL POINTS IN THE USE OF STROPHANTHUS.—Cornwall in the *Medical Record* of September 15, 1917, writes enthusiastically of the use of strophanthus and says in chronic valvular disease with decompensation of considerable degree, requiring direct heart stimulation, he gives strophanthus tincture in doses of two or three minims every four hours, or strophanthin, $1/1000$ grain hypodermically, every four hours. In extreme decompensation in mitral stenosis, with auricular fibrillation, strophanthin is given hypodermically, every four hours, in doses of $1/500$ grain, or even $1/250$ grain, and usually morphine sulphate in combination with it in doses sufficient to alleviate the dyspnea and restlessness. This combination of strophanthin and morphine has given Cornwall the best results which he has been able to obtain in this class of cases. After securing compensation, which is often fragile, it may be necessary to keep up the administration of strophanthus in reduced doses, and sometimes of the morphine also. Strophanthin usually causes so much local irritation when given hypodermically that its use is forbidden.

In conditions of chronic myocardial degeneration with loss of compensation, strophanthus is employed when strychnine is not sufficient. Ambulant cases are given one or two minims of the tincture every four hours, and cases confined to bed one to three minims every four hours. In the severe cases strophanthin is given alone or with morphine, in the manner before described. The superiority of strophanthus over digitalis nowhere appears more clearly than in the treatment of advanced chronic myocardial degeneration.

The author desires to emphasize this point in the use of strophanthus: that it should be used in the right doses, which, except when used for

emergencies, or after establishment of tolerance, seem to be much smaller than those which have been generally recommended; for it is only by using it in the right doses that the best results can be obtained. There is reason to suspect that when given in excessive doses, especially if long continued, it can injure the heart, perhaps more than digitalis does.

TRUTH ABOUT INTRASPINAL INJECTIONS IN THE TREATMENT OF SYPHILIS OF THE NERVOUS SYSTEM.—In the *Journal of the American Medical Association* of September 1, 1917, Sachs opposes this plan of treatment and states that some of the ardent advocates of the intraspinal method are beginning to see the light; and since they have acknowledged, as Amoss did recently, that the virus in poliomyelitis within the brain and spinal cord cannot be reached by intraspinal treatment alone, they will also be compelled to concede that what is true of the poliomyelitis virus must also be true of the syphilitic virus similarly located within the tissues of the central nervous system. Physiologic evidence is therefore wholly adverse to the claims of those who favor intraspinal injections of salvarsan for the cure of syphilis of the nervous system. But there are other reasons why the method is not satisfactory, and chief among these is the greater danger attendant on intraspinal therapy. Furthermore, the successful treatment of many of these cases of syphilis of the nervous system calls for intensive salvarsan treatment, by which Sachs means intravenous injections of 0.3 or 0.4 gm. of salvarsan repeated every three or four days until the patient has had from fifteen to twenty or even fifty injections. A similar number of lumbar punctures for the purposes of intensive treatment would necessarily prove most disagreeable, if not harmful, to the patient; but beyond all these facts it has been definitely ascertained that the serious forms of general paresis or of tabes dorsalis have not been favorably affected by intraspinal injections, and nothing has been accomplished by them that could not have been achieved by the intravenous method.

Sachs is entirely in sympathy with Halliburton's view that "particularly regrettable is the divorce between those who pursue their investigations by the bedside and those who work in the laboratory." It is especially regrettable, Sachs would add, that changes in biologic findings should be made the criterion of the efficiency of any therapeutic method. Claims were made for the intraspinal method chiefly by men whose interest was centered on a change in the Wassermann reaction, in the reduction of the cell count of the cerebrospinal fluid, and in the change in the globulin reaction, rather than on clinical improvement in the condition of the patient. After all, the patient remains the chief consideration. One may speak glibly of remissions in general paresis and of improvement in tabes dorsalis, but it takes the experience of the trained neurologist and psychiatrist to estimate at their true value changes in clinical symptoms.

In many particulars the advantages of the intraspinal method have been grossly exaggerated. The opinion has reached the laity, as promulgated by advocates of the intraspinal method, that now general paresis can be cured and by the intraspinal method alone. Sachs has personal knowledge of patients suffering from general paresis who have been treated persistently and on innumerable occasions by intraspinal injections administered by the chief apostles of this method. Some of these patients have

had remissions, but Sachs doubts whether a single one has been definitely cured, while all the others have taken the natural but gradual course toward a fatal termination. As for the remarkable reduction in the number of lymphocytes and the change in Wassermann reaction claimed as a result of the intraspinal method, Sachs asserts definitely, and the truth is already known to many, that the same changes have followed on intravenous injections, pure and simple, on repeated lumbar punctures, and on the introduction of the patient's non-salvarsanized serum. Evidently the changes in the cerebrospinal content may be brought about in a number of different ways.

Sachs does not for a moment question the accuracy of the attractive tables published by the advocates of the intraspinal method, but of one thing he is very certain, that there is absolutely no correspondence between a change in the cerebrospinal content and the condition of the patient. He could instance patient after patient, and some of them he has been able to demonstrate to others, in whom after both intraspinal and intravenous treatment, for general paresis or for tabes dorsalis, there has been no change in the Wassermann reaction or in the number of cells in the cerebrospinal fluid, and yet the patient has shown most satisfactory improvement in his general condition.—*Therap. Gazette*.

TRENCH FOOT.—Haydon (*Journal of the Royal Army Medical Corps*, August, 1917) notes that 240 cases of trench foot were admitted to the hospital during December, 1916, and January, 1917. Class one represented those who had almost recovered from the effects of exposure to cold. The feet were normal except for tenderness and aching at night. Warm foot-gear and rest in the hospital cured them. Class two represented slight cases which would be fit for duty in a few months. The legs were swollen following prolonged cold and wet. The swelling lasted for some days. As the swelling subsided severe pain described as rheumatism was felt in the legs. Walking was only possible with pain and difficulty. Boots could not be borne. The appearance of the feet and legs was almost normal. The general condition was unaffected. Class three represented cases with local gangrene of toes or toes and heel, but without constitutional disturbance. The toes were in some cases ultimately lost. Even beyond the area of gangrene there was no impairment of circulation.

Class four represented the septic cases, and all had more or less constitutional disturbance. There was gangrene often with extensive cellulitis. Loose stockings seemed most serviceable for these slight cases, over layers of wool, and foot coverings made of thick, warm, soft material, which came well above the ankle. Time is an essential factor in the cure of the pain and tenderness.

As to the gangrenous cases there is never any justification for immediate amputation. Conditions always improve after rest in the hospital. When the toes alone are gangrenous, with little assistance by way of operation they come away at the metatarsophalangeal joints and healing takes place, resulting in a useful foot. It is interesting to note that open ether was used as the anesthetic as long as the lungs were healthy, being preceded by an injection of morphine and atropine. The site of amputation after shaving the limb was washed with ether soap, and then with

ether. When quite dry it was painted with 2-per-cent solution of iodine in rectified spirits. Ten minutes before the operation the great sciatic was injected with a 4-per-cent solution of eucaïne. In some cases the skin and muscles just above the operation area were injected with the same solution. Two and a half pints of normal saline were infused either subcutaneously or intravenously at the time the operation was taking place. In some cases intravenous antiseptics were added to the infusion, and subcutaneous injection of thirty cubic centimeters of polyvalent antistreptococcal serum was given.

As to prophylaxis, the author states that loose-fitting boots should be worn over thick, warm socks. Moreover the feet should be kept clean, and regular physical exercise is indicated to retain the tone of the vascular system. It is stated that the wearing of puttees predisposes to frost-bite since they constrict the legs, more especially when they become damp and the material shrinks. In many of the worst cases admitted puttees have been worn.

The perusal of the article suggests that the author is a profound believer in the doctrine of "doing everything."

(CANCER DECALOGUE.—(From the *Ohio State Medical Journal*.)

I. Cancer is a *local disease* always starting in some one spot.

II. Cancer arises after a long continued irritation of various kinds and in and about benign growths or ulcerations. These conditions are known as *precancerous conditions*. For instance, cancer of the lip and mouth arises from pipe smoking, bad teeth, etc.; external cancer from burns, moles, warts, etc.; cancer of the stomach from a gastric ulcer; cancer of the gall bladder from gall stones; cancer of the uterus from neglected ulcerations or lacerations; cancer of the breast from neglected sores, cracks, and especially from lumps that were at first benign.

The moral of a precancerous condition *prevents* cancer from developing. Hence, the duty of every physician to advise the removal of every precancerous condition especially if there are any signs of changes taking place in it. The safest way is to remove any precancerous condition while it is still quiescent.

IV. Pain is never present in early cancer. When pain is present, it is too late for a radical cure.

V. The first warnings of cancer do not differ from warnings from diseases that are not cancer, hence, the reason why early cancers are so often overlooked. Consequently, always think of *cancer* first; *stop, look, feel and think*.

VI. There is no such thing as "hemorrhage" of the "change of life." every hemorrhage is pathological and may be caused by a cancer. *Examine the patient first and prescribe only after*. Any woman who after menopause begins to "show" is more than suspicious of malignancy of the uterus. Have her operated upon.

VII. Any lump in the breast which begins to *grow larger, gets harder, loses its sharp limits*, is becoming malignant. *Examine the patient first and prescribe only after*.

VIII. In a patient over 35 years old any *persistent indigestion* must be regarded with suspicion. In any bleeding of the rectum, the presence

of a cancer must be first eliminated before treating for "bleeding piles." *Examine first, and prescribe only after.*

IX. In patients over thirty years of age, any goiter *growing rapidly and getting harder* in consistency is very suspicious of malignancy. When that goiter has become adherent to the neighboring tissues it is too late for a cure.

Examine first, and prescribe only after.

X. In patients of middle age any blood in the urine must be considered as of cancerous origin until proved otherwise. *Examine or have that patient examined first, and prescribe only after*

SUGAR AND WORKING POWER.—There can be no longer any doubt that the great function of carbohydrate food is to afford energy. This does not mean that other types of foodstuffs are useless in this respect: on the contrary, it is easy to foresee and to devise conditions in which fats and proteins are responsible for the energy metabolism. In starvation, for example, carbohydrate is not directly available; but under normal conditions of diet, approximately two thirds of the entire calorific intake is derived from carbohydrates by the average person with no extreme eccentricities in his eating habits. Half a century ago, physiologists were inclined to attribute a superior value to proteins in the performance of muscle work, the supreme manifestation of the transformation of energy in the body. Today it need scarcely be argued that, so long as work is not excessive and does not lead to pathologic consequences, with an abundance of all types of foodstuffs in the diet, there is practically no change in the nitrogen output, i e., there is no evidence of protein disintegration from it,

Anderson and Lusk have just furnished even more direct evidence of the superior value of carbohydrate in muscular activity. In calorimetric observations on animals, they found that the quantity of energy required to move a unit of body substance a definite distance through space is a constant factor that is independent of the condition of the body. It matters not whether the subject is in the best nutritive condition or has lost as much as one fifth of his weight through fasting: the quantity of energy required to do a definite amount of work remains the same.

It is known that the metabolites of the foodstuffs, but notably of proteins, induce an extra heat production in the body which is commonly described as their specific dynamic action. They stimulate metabolism independently of the use to which they are put in the organism. Anderson and Lusk have found that whereas on a meat or high protein diet the increment of energy required to perform a definite amount of mechanical work is added to the specific dynamic quota that meat ingestion contributes to the basal metabolism, the metabolites of glucose induce no such extra heat production. When mechanical work is accomplished during the hours following a large ingestion of glucose, the metabolism rises to about the same height as when the same amount of work is done during a period when the gastro-intestinal tract is free from food. There is no "waste" of energy in useless heat production. This economy of carbohydrates for the accomplishment of work deserves to be emphasized at a time when food fuel is in great demand and the superior value of meat is still lauded.

Whatever significance meat may have as a highly palatable form of protein food must not be confused with the discarded claims of its superiority as a source of energy for our working machine.—*J. A. M. A.*

ETIOLOGY AND TREATMENT OF TRENCH FOOT.—Joshua E. Sweet, George W. Norris, and Harry B. Wilmer (*Journal A. M. A.*, February 16, 1918), from a study of the conditions encountered in the affection known as trench foot, believe that it is due in part to an incomplete spasm of the arterioles of the foot closely analogous to the condition seen in Raynaud's disease or erythromelalgia and probably due to some factor which either increases the vasoconstrictor substance in the blood, or diminishes the vasodilator substances. Whatever the precise cause, the thyroid gland is capable of producing a peripheral vascular relaxation when overactive and the administration of iodine is the best available means of causing an overactivity of this gland in the absence of the dried substance. The plan of administering large daily doses of potassium iodide in doses of 1.3 to two grammes three times daily was tried in a series of thirty-one cases of trench foot and produced marked to complete prompt relief of the pain in all but two of the cases without the need for the use of anodynes or analgesics. It was found that in cases of trench foot the blood pressures in the legs were regularly higher than in the arms, contrary to the normal equality of the two. The use of iodide reduced the leg pressures to the level of the arm pressures in thirteen cases in which the observations were made. The reduction in leg blood pressure seemed somewhat parallel with the degree of relief of the pain. The observations need further confirmation according to the authors.

EXCISION OF HEMORRHOIDS UNDER LOCAL ANESTHESIA.—E. E. Morrison (*Journal of the Kansas Medical Society*, December, 1917) recommends the following method as giving the best of results without the necessity for the use of a general anesthetic with its uncomfortable sequelæ. The patient is given sixty mils—two ounces—of castor oil thirty-six hours before operation and twelve hours before he is given repeated soap-suds enemas until the water returns clear. Twenty-four hours before operation he is put on a soft diet, which is continued for three days after operation. An hour before operation he is given a hypodermic injection of sixteen mgm.—0.25 grain—of morphine with 0.6 milligram—0.01 grain—of atropine sulphate. The patient is placed in the Sims position for operation and the whole field is sterilized by scrubbing with soap and water, followed by sponging with seventy per cent. alcohol. A 0.25 per cent. solution of novocaine with epinephrine is used for anesthesia. With a one inch needle on a five mil syringe the first injection is made beneath the epidermis just outside of the mucocutaneous junction behind the anus. From here by a series of wheals a ring of tissue entirely surrounding the anus is anesthetized, ten mils of solution being usually required. Then, using a needle two and a half inches long, the deeper tissues are anesthetized by inserting a finger into the rectum as a guide. The needle is first introduced into the anterior portion of the sphincter, where ten or twelve drops of the solution are injected. The needle is then pushed deeper and deeper, making injections after every increase in depth, until the whole length of the needle

has been inserted. About four mils of the solution are required. The needle is then withdrawn until it just escapes from the sphincter and it is then passed into the tissues just outside of that muscle which are injected with the remaining mil. This process is repeated on each side of the anus, in front of and behind it, and in each perianal quadrant. After two or three minutes from the completion of the injections the anus is dilated by inserting an increasing number of fingers until the dilatation is maximal. The hemorrhoids are then removed by one of the well known and accepted methods.

GENESIS OF THE EPIGASTRIC PAIN IN ULCER.—Although the sensation of pain furnishes data of first importance to those who are concerned with the management of disease, the physiology and pathology of the pain sense have not yet received the careful scientific evaluation and analysis that their significance in medicine warrants. It has been said that for the evolution of the race as well as for the preservation of the individual, the pain sense is all important because it affords an expression in consciousness of the existence of noxious factors liable to do damage to the tissues of the body. It seems strange that pain may result from changes in organs that are devoid of ordinary sensibility. Surgical manipulation of the intestine, for example, is not usually attended with any annoying sensation; yet a strong contraction of the muscular wall or increased distention of the intestine will evoke a gripping pain. The ureters and other ducts in the body rarely give any evidence of themselves in our sensations until they are firmly contracted on some obstruction contained within their lumen.

Gastric and duodenal ulcers afford instances in which pain sensations give indications of peculiar value to the diagnostician. The pain is so characteristic in coming as a rule when the stomach is empty and in being relieved by the ingestion of food that the incidence of the distress may give a clue to its differentiation from the pain of gastric cancer. Its periodicity also has been noted in contrast with the diffuse sensation commonly designated as gastralgia. The painful feeling awakened by the contact of an irritant like acid with an abraded surface of the skin or mucous membranes is sufficiently familiar in everyday experience to have suggested the view that the pains of gastric and duodenal ulcers are associated with acid irritation of hyperexcitable nerve endings or exposed nerve fibers in the ulcer area. This is the most widely current hypothesis of the genesis of certain epigastric pains.

In harmony with the theory just suggested is the frequent occurrence of the so-called gastric hyperacidity in cases of gastric and duodenal ulcer, and the temporary alleviation of the ulcer pain by food and alkalis. In a recent study of the origin of the epigastric pains in cases of gastric and duodenal ulcer, Carlson has pointed out certain facts that are not readily explained by the "acid corrosion" theory. For example, gastric ulcer with or without clinical hyperacidity may be present without pain. Gastric ulcer and ulcer pain may be associated with normal acidity, and even with hyperacidity. The pains of gastric ulcer may be present and be temporarily relieved by food alkalis, even though the stomach contents are alkaline. The introduction of acids (0.5 per cent. of hydrochloric acid) into the stomach does not, or at least not invariably, induce or augment the ulcer

pains in gastric ulcer patients. The ulcer pains usually show a periodicity (being described as "gnawing" or "boring"), and the periods are too short to be explained by variations in the gastric acidity. An alternative hypothesis connects the pain with contractile phenomena of the stomach.

The association of periodic pangs of hunger with the coincident contractions of the empty stomach has become an accepted fact in physiology. Carlson has reinvestigated the problem of distress in cases of well diagnosed ulcer by the use of graphic methods of recording gastric contractions associated with chemical analysis of the gastric contents. He has established anew the frequent lack of parallelism between ulcer pains and gastric acidity. Indeed, within certain limits the motility of the stomach is independent of the chemical reaction of the stomach contents.

As the result of his studies, Carlson states that all the evidence now points to the fact that the pains of gastric and duodenal ulcers are contraction pains arising either in the stomach or in the pylorus and upper part of the duodenum. In the case of the stomach the contractions are usually not stronger than those of normal digestion peristalsis of the filled or the hunger tonus rhythm of the empty stomach. This points clearly to a condition of hyperexcitability of the gastric pain nerves in the ulcer patients experiencing the typical ulcer pains. Since, Carlson adds, the ulcer pains are due to tension of excessive contractions or of normal contractions on hyperexcitable pain nerves, it is evident that pathologic states other than ulcer, inducing such hyperexcitability or hypermotility, will cause symptoms of gastric ulcer pains practically identical with those of ulcer, as appears to be the case in many instances of appendicitis, cholecystitis and achylia.

These findings regarding the genesis of gastric ulcer pains have been corroborated in carefully diagnosed clinical cases observed at the Presbyterian Hospital in Chicago by Hardt. He, too, noted that the ulcer pains may be absent in the presence of high acidity, and present in the absence of acid in the stomach. Hardt states that any active process, such as an ulcer or carcinoma, which produces a hyperirritable condition may result in pain; but the pains are intermittent and, as may now be suspected, they are synchronous with the contractions of the stomach, pylorus or duodenum. Furthermore, they bear no relation to the degree of acidity that is either naturally present or induced by feeding.

It follows from these associations of ulcer pains with the tonus and contractions of the body of the stomach that any measure which inhibits or decreases the gastric tonus (ingestion of food, water, alkalis or acids, passing of the stomach tube, etc.) will temporarily ease the pains, irrespective of the chemical reaction of the stomach content. Continuous epigastric pain in ulcer cases may thus be attributable to a persistent hypertonus of the stomach or pylorus. If we accept this analysis of a much debated problem, it is easy to accept Carlson's further reminder that the elimination of the ulcer pain is no criterion of healing of the ulcer. This criterion, he bluntly states, satisfies only the ignorant patient and the careless clinician. —*Journal A. M. A.*

SODIUM PERSULPHATE IN TETANUS.—Leyva has reported three successfully treated cases of tetanus at the American Ambulance Hospital.

Paris. He says: Antitetanic serum beyond a doubt has produced marvelous results, but it does not always prevent tetanus. Before the introduction of sodium persulphate in the American Hospital at Paris, 75% of the cases of tetanus ended fatally. It is true that the number of cases treated with persulphate of sodium is not large enough to establish its efficacy beyond a doubt; on the other hand, it is quite possible that the fact that the patients who were treated in this way recovered, while the others did not, is not due to mere chance. The persulphate, combined with the antitetanic serum relieves the pains and spasmodic attacks to such an extent that the patient begs to be given the injections. The minimum dose must be 60c.c. of a five per cent solution in one day, as was clearly proved by the third case, in which there was no improvement until this dose was reached. The solution must be freshly prepared, and must be kept cold and in a shaded place, as both heat and light decompose it. The solution was prepared in doubly distilled water, using the persulphate of sodium in sealed bottles prepared by the firm of Lumiere, Paris.—*Surg. Gynec. and Obst.*, Vol. XV, 613.

THEODORE J. GRAMM, M.D.

THE TREATMENT OF GUNSHOT WOUNDS.—Moynihan summarizes his article on the treatment of gunshot wounds practiced abroad as follows: Perfect mechanical cleansing—that is the excision of all contaminated, infected, or dead parts—the removal of all fragments of clothing (by far the most important of all causes continuing infection in a wound) and of all projectiles, is the supreme necessity in all cases. In early cases this may allow of immediate closure of the wound, which will be followed by healing in the great majority of cases, say in 80 per cent. or perhaps even 90 per cent. of those in which there is no loss of tissue.

In infected early cases, the mechanical exposure and cleansing may be followed by a treatment directed to the removal of the remaining infection. Physiological and antiseptic methods have each their advocates. The aim of both is to permit of the earliest prudent secondary closure of the wound. In infected late cases, a thorough mechanical exposure and cleansing of the wound and the parts around will allow of secondary closure forthwith if certain antiseptic pastes are used. Experience shows that similar results have followed upon this mechanical treatment of the wound without the introduction of antiseptics. A further trial in this class of cases may show that the natural defenses of the tissues are ample to deal with the infections then remaining.

It is the natural defensive powers of the body fluids and tissues, of serum and leucocytes that are the chief agents in finally subduing the bacterial infection in a wound. Sufficient reliance does not seem to be placed on the stupendous power the body tissues possess for controlling infection. Finally full emphasis must be laid on the paramount necessity for the complete immobility of wounded parts at all times and on all occasions. So will one of the most powerful agencies in making for reinfection and autoinoculation be kept in check.—*Surgery, Gynec. and Obst.*, Vol. XV, 583.

THEODORE J. GRAMM, M.D.

POST OPERATIVE PULMONARY COMPLICATIONS.—Cutler and Morton (Boston) have considered the subject from data furnished at the Massachusetts General Hospital, and found the predisposing factors to be: Poor

general condition i. e., age, enemia, alcoholism, arteriosclerosis, weak heart or susceptible lungs. Oral sepsis, i. e., carious teeth, necrotic, tonsils septic. Freexisting lung pathology, not only tuberculosis but bronchitis, emphysema or a recently subsided pneumonia. Anesthesia badly given, i. e., forced, aspiration of mucus permitted, unnecessary intubation of nasopharynx, vomiting on the table, and the presence of septic foci. Medical operations that open up unnecessarily, pathways to the neighborhood of the lungs themselves. Operations in the epigastrium carry the added danger of lung complications through ease of vascular and lymphatic extension. Exposure to cooling fluids or to drafts (vaso-motor disturbance). Postoperative pain resulting in hypostasis from poor expansion. The prophylactic measures are obvious.—*Surg. Gynec. and Obs.*, Vol. XV., 621.

THEODORE J. GRAMM, M.D.

THE TREATMENT OF PUERPERAL SEPTICEMIA BY SERA AND VACCINES.—Beruti (Argentine) reviews the history of serum treatment of puerperal septicemia. As regards specific antistreptococcic serum, his experience and his studies of the results obtained by others is that this method is a distinct failure. The course of its action is not known, whether a mono or a polyvalent serum is the better. The laboratory, the clinic, and statistics have failed to solve the problem of whether or not to apply specific serotherapy in the different forms of puerperal fever. Beruti also considers vaccine therapy and finds that the clinical and experimental results obtained both at home and abroad with specific vaccines are fully as contradictory as in the case of specific sera. They have not given immunity, and in practice have not fulfilled what they promised in theory. Although sixty-eight years have passed since the discovery of the etiology of puerperal fever and thirty-eight years since Pasteur found the microbean agent none of the innumerable local and general treatments, nor antiseptics, colloids, sera or vaccines have proven to be a really efficacious specific agent in puerperal fever.—*Abstr. Intern. Abstr. of Surg.; Gynec. and Obs.* Vol. XXV, 565.

THEODORE J. GRAMM, M.D.

VALUE OF THE LEUCOCYTE COUNT IN ACUTE APPENDICITIS.—Hewitt has studied one hundred cases and concludes that the absolute count, when taken alone, is of questionable value. The polynuclear count alone, in the majority of instances, is a reliable index in diagnosis. The correlated, absolute and polynuclear counts are of greater value than either count taken alone, especially as regards prognosis. In general, a high absolute count, with a high polynuclear count, e. g., absolute 35,000, polynuclear 95 per cent., means usually a good prognosis. A high absolute count, with moderately low polynuclear, e. g., absolute 30,000, polynuclear 80 per cent., means usually a good prognosis. A low absolute count with a high polynuclear count, e. g., absolute 7,000, polynuclear 95 per cent., indicates a grave prognosis. A low absolute count with a low polynuclear count e. g., absolute 7,000, with polynuclear 65 per cent. usually means no infection, or that the acute condition is due to anatomical or mechanical causes.

Normal or subnormal figures do not necessarily indicate the absence of suppuration, gangrene, or their sequelae. Catarrhal cases, fulminating cases, moribund cases, and walled-off abscesses, frequently do not stimulate leucocytosis.—*Abstr. Surg. Gynec. and Obs.*, Vol. XV., 519.

THEODORE J. GRAMM, M.D.

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THE ORIGIN OF DREAMS—A SOMATIC THEORY.

BY

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FATIGUE of the body is due partially to an exhaustion from too sustained an activity of the body cells, and partially to a poisoning from an accumulation of the toxic by-products of cell action. Rest is required to enable the cell to regain its tone and to relieve it and its neighborhood of these toxic principles, the chemical results of the physiological activity. The brain cells are no exception to the other body cells and are subject to the same fatigue, requiring probably even longer for their recovery than does the simpler muscle cell. Furthermore, of the brain cells, none is, to use an old word, so obnoxious to fatigue as are those concerned in the higher intellectual acts, such as willing, and judging and interpreting. Appealing to common experience we find that physical fatigue is more quickly recovered from than is mental fatigue, and we know that deep thinking wearies and that to the untrained thought is always a burden. The *hoi polloi* run from an intellectual demand—run to the “movies” where they may be safe from any tax upon their undeveloped intellectual parts.

In dreamless sleep we may regard all brain functions that have to do with the external world, as suspended; but sleep itself we may regard as primarily a rest of the willing and directing centers. It may, therefore, be readily conceived that while these centers are at complete rest, the per-

ceptive centers, for instance, the auditory and visual, may be only partially so; and, moreover, the directing centers, requiring the longer rest, may be conceived to be still dormant while the perceiving centers are wakening. This being the case it is possible that the perceiving centers may be aroused by various internal and external stimuli to the formation of auditory and visual pictures, the higher directing centers at the same time remaining quiescent. Such a state of affairs will be especially likely to occur, in the later night and early morning, the time, as we know, of most frequent dream production. When the stimulus penetrates to the prefrontal cells, the intellectual area, when its value is such that it oversteps the threshold of consciousness, the sleeper awakes. The recognized pictorial nature of the dream is in accordance with this conception as is also the accepted belief that the dream contains no reasoning process, remembering as to this last, that while apparent reasoning may occasionally be found in a dream content, such is really a *picture* of reasoning—a memory product of a mental act of the past.

In thus speaking of areas of the higher intellect and of areas of perception, I am not forgetting the modern conception that for the higher intellectual functions the brain acts as a whole; but areas of perception are well marked, and I believe that the impulse for the higher intellectual act, the sense of consciousness, in short, emanates from the prefrontal cells. That acts requiring highly complex brain functioning may be performed without consciousness being fully aroused is evident in the execution of those acts which have become automatic. For these originally there is a demand upon the conscious centers, but this demand becomes less and less importunate until finally the conscious element becomes insignificant. In the neuroses conscious effort may again become a necessity, as we well know.

Freud* gives full recognition to the various theories of somatic origin for the dream (p. 16), (p. 185, et seq.), but dismisses them all as follows:

"However popular this theory of somatic dream stimuli may have become, and however seductive it may seem, it is nevertheless easy to show the weak point in it. Every somatic

* "The Interpretation of Dreams," Sigmund Freud, LL.D. Authorized Translation of the Third Edition by A. A. Brill, M.D. MacMillan Company. Reprinted 1916.

dream stimulus which provokes the psychic apparatus to interpretation through the formation of illusions, is capable of giving rise to an incalculable number of such attempts at interpretation; it can thus attain representation in the dream content by means of an extraordinary number of different ideas" * * * "Other objections may be directed against the fundamental assumption of the whole theory of illusions—the assumption that during sleep the mind is not in a condition to recognize the real nature of the objective sensory stimuli. The old physiologist Burdach proves to us that the mind is quite capable even during sleep of interpreting correctly the sensory impressions which reach it, and of reacting in accordance with the correct interpretation."

Another objection is a little hazy in expression but I give it:

"The inadequacy of the theory of somatic dream stimuli may also be demonstrated in another manner. Observations show that I am not urged to dream by external stimulations, even if these stimulations appear in the dream as soon as, and in case that, I dream. In response to the tactile or pressure stimulus which I get while sleeping, various reactions are at my disposal, I can overlook it and discover only upon awakening that my leg has been uncovered or my arm under pressure; pathology shows the most numerous examples where powerfully acting sensory and motor stimuli of different sorts remain without effect during sleep. I can perceive sensation during sleep through and through sleep, as it were, which happens as a rule with painful stimuli, but without weaving the pain into the texture of the dream; thirdly, I can awaken on account of the stimulus in order to obviate it. Only as a fourth possible reaction, I may be impelled to dream by a nerve stimulus; but the other possibilities are realized at least as often as that of dream formation. This could not be the case if the *motive for dreaming did not lie outside of the somatic sources of dreams.*"

The italics are Freud's, a sort of raising of the voice as it were, toward the end. There are other objections, but they are criticisms of special features of certain special somatic theories, which have no followers in any case, and need not here be given. His final objection (p. 192) is that the somatic stimulus idea does not fit in with his own theory:

"If we have succeeded in proving, by a procedure which other authors have not applied in their investigation of dreams, that the dream as a psychic action possesses value peculiar to

itself, that a wish supplies the motive for its formation, and that the experiences of the previous day furnish the immediate material for its content, any other theory of dreams neglecting such an important method of investigation, and accordingly causing the dream to appear a useless and problematic psychic reaction to somatic stimuli, is dismissible without any particular comment."

Now I do not propose to attempt an analysis of Freud's work, but Freud and the dream are correlate thoughts and any presentation of a theory of dreams must now include a reference to him. These objections, above, I give merely to show by their weakness what I may fail in demonstrating myself, namely, the strength of the somatic idea. His assumption that by any theory other than his own the dream must cease to have psychic value, becoming a merely "useless and problematic psychic reaction," I feel is unwarranted. Freud's name has traveled far and his books have been widely read. Technologists have rejected him absolutely; psychologists have been interested but not often convinced. He has made valuable contributions to psychology, however, and to our knowledge of the dream, and if we find his satisfaction in his own proofs only equalled by the ease with which he rejects the work of others, we smile—sometimes laugh, and go on to the next paragraph which may probably be well worth our study.

When he declares all dreams to express wish fulfilment and one of his pupils or patients brings in a dream which certainly does not express anything of the kind, he is content that this proves his theory. The pupil or patient dreaming such a contradictory dream evidently does so to spite the professor—he *wishes* to spite him, therefore dreams a dream contrary to the professor's theory—and there you are! He says (p. 128) after describing one of these dreams, "It was thus her wish that I should be in the wrong, and this wish the dream showed her as fulfilled." And yet (p. 439) he says: "The wish manifested in the dream must be an infantile one," one dating back to the infantile period. Again (p. 379), he himself dreams something very unpleasant indeed, with no wish in it—but this unpleasant thing happened in his youth and the dream is, of course, a wish to be young again!

As I say, we can read this, and laugh, and pass on to something else. So too we shall omit more than a reference

to his universal sex stimulus, that which has aroused the greatest antagonism and has gained for him his largest class of readers. Our criticism of his psychology of the dream activities, is only such as may be made of many other writers—namely that of the free use of undefined terms. For instance, Freud's "unconscious" and "foreconscious" which he often writes "Unc." and "Forec." to show, probably, that they are something different from the ordinary, are in his psychology very loose terms indeed. The "Unc." is a place, a receptacle, a tunnel, for thoughts go into it, and come out of it, and pass through it, or sometimes maintain themselves in it (p. 437). At other times it is a living purposeful thing as when it "entangles with its connections" "those impressions and ideas of the foreconscious" which have been left unguarded (p. 444). It departs still further from our usual concept when we find (p. 448) that it "knows no other aim in its activity but the fulfilment of wishes" and "has no other forces at its disposal but wish feelings." On the whole pretty busy for a mere negation!

When we come back to the dream itself, however, we find that Freud has made important contributions to our knowledge—in this field no one more. His explanation of the dream work, of condensation, association, displacement, the relations between the dream content and the "dream thoughts," the latent dream material, manifold determination, inversion, the relation of the dream to hysteria and the neuroses—all these things, and many more, are welcome additions to our knowledge. But it is not in the field of analysis that we take exception to Freud. Like all Germans he is here thorough, masterful in detail, and untiring in studious application to the minutiae of his subject. Our exception is taken to the concept which he derives from this study. May we not say, again that as with all Germans, his logic is unsatisfying, his induction faulty? The suppressed wish complex struggling for expression, the inexorable and forbidding censor, the disguise assumed by the complex and its protean attempts to escape, the innocent symbolism under which it manages its brief airing in the dream, and the nightmare horror which arouses us when its escape is discovered—these are the things to which we do object. As to the practical issue of all of Freud's work, the exaltation of the dream as a source of knowledge of the psyche of the dreamer, so far

good; but as to his objection to the somatic theory of dream origin, that if this be conceded the dream will thereby lose its psychic value, this fear, as I have said, I do not believe to be warranted. The dream, however, started, is still a cerebral product and in my conception remains still helpful in our study. As Dr. William A. White* says, "There is nothing fortuitous in mental life. Determination holds as definitely in the psychic as in the physical world and no mental fact can exist that has not its efficient cause in antecedent mental states." I shall not take up Freud's objections seriatim but believe that they will all be found answered in what follows.

What are the stimuli which give rise to the brain picture? They are the impulses carried over the afferent tracts to the brain—sensations of touch, pressure, pain, of temperature changes, the muscle sense, and the general somatic consciousness; the sense of sound, of light, or of the removal of an accustomed light, entoptic and intra-aural phenomena, odors, tastes, and finally, and so importantly, the sense of desire, for food, for drink, for excretion, or for sexual relief. As regards somatic consciousness it is to be remembered that while we have ordinarily little knowledge of our organs in health, still these same organs may become evident enough on disturbance of function and, even in health, may produce brain registrations when the inhibiting, compulsively ignoring, action of the higher senses is withdrawn, as in sleep.

Has the dream considered as of somatic origin a psychic interest? Has it a psychic value? To the first question decidedly an affirmative answer must be given, and to the second also an affirmative if a knowledge of tendencies is worth while. For the dream, though it does not reveal character, doubtless does often reveal certain tendencies and impulses as well as habits. The stimulus is but the spark by which the dream is touched off: the material for the dream is within the brain itself and it is this material which has, of course, the psychic value.

Let me quote from Dr. Crile:†

"* * * the receptor mechanisms which we assume to exist within the brain * * * intricate mechanisms consisting of a vast number of parts or patterns each of which has

* "Outlines of Psychiatry," William A. White, M.D. Nervous and Mental Disease Publishing Company. Fifth Edition, 1915.

† "A Mechanistic View of War and Peace." By George W. Crile. The Mac-Millan Company, 1915.

been endowed by evolution with the quality of being modified by each passage of specific energy over it. Each passage of specific energy initiated by a given stimulus facilitates the passage from an identical stimulus at a subsequent time."

Crile carries this on to the motor or action patterns with which we are not now concerned, but I feel that the statement, as Carlyle would say, is "significant of much."

Professor Ellwood writes:*

"In man, as in all the lower animals, there is a highly developed nervous system, with multitudes of connections between its elements. These connections are pathways of nervous currents. Many of these connections are inborn and seem to be as much a part of the heredity of the individual and the race as stature, the color of the eyes and hair, or any other physical characteristic." * * * "Instincts are then pathways of the nervous currents, which have as their functional correlate inborn motor tendencies, and as their psychical correlate inborn psycho-physical dispositions." * * * "All the habits of the individual, therefore, rest in the last analysis upon the native impulses." * * * "Instinct represents the preformed pathways in the nervous system made in response to demands of previous life conditions."

So, also, Dr. White (*Loc. cit.*): "These physiological processes, here as elsewhere, involve changes in the energy and the material substance of cells and fibres and so when a certain mental process has occurred once accompanied by its correlative physiological process the changes in nerve cells and fibers will have left such an impress that a subsequent process of this sort will occur more readily."

The psychic interest and value of the dream I find in the existence of these brain patterns—evolutionary and habit groupings of the brain cells. Certain cells are associated, grouped and correlated to form a picture; a second similar grouping becomes more easily produced than was the first, and each subsequent similar grouping becomes increasingly and progressively facilitated. It is so our habits are formed. But the groups are facilitated not alone by repetition, there are tendencies, evolutionary in character, and inheritances, which determine the ease with which the patterns may be produced. Of these tendencies the phylogenetic, it may be indicated, belong to the mores—they *are* the mores—and, there-

* "The Instinctive Element in Human Society." Prof. Charles A. Ellwood. *Popular Science Monthly*, LXXX, No. 3. (March, 1912).

fore, though important enough in their influence on the individual, belong more particularly to the social field. The ontogenetically determined groups, on the other hand, are those which tell us most of the individuality of the dreamer and of his subconscious life. The pictures produced by the grouped cells remain as memory patterns to be set in action by stimuli which resemble, or by association are related to, the original stimulus. In the majority of cases it is the stimulus of association which awakens the memory pattern both in the dream and in the conscious state. Could we, when awake, recall our memory pictures only under the action of stimuli identical with those which had produced them our memories would be blank indeed. But this is not so; in our common experience we know that a sound, an odor, a fleeting sensation, is quite sufficient to call forth a memory which may seem to have little connection with the stimulus, so little, indeed, that the stimulus itself may be hardly registered by our consciousness. So in the dream an associated stimulus alone is sufficient to start the memory pattern into activity. It may be objected that the picture is not complete. No, neither is it in conscious life, even when guided by a directing wish from the higher centers to make it so. It may also be objected that the dream offers many trivial incidents which can hardly be said to play any part in *emphasized* brain patterns, and furthermore that many dreams are based upon a recall of single happenings which could in no way be formed into habitual brain patterns. Taking the second part of the objection first I believe it will be found that the single event, often of early life, which is recalled was one which of itself or because of its associations made a vivid emphatic impression; and furthermore that while this event itself was not duplicated, thoughts of it were, and the brain pattern was thereby doubly determined, by original emphasis and by recurring memories. As regards the trivial incident in the dream I may state that I have no desire to find a significant place for all of the dream contents. Freud has claimed that any satisfying dream theory must do this, but the spectacle of what he has been reduced to in an effort to live up to this rule deters me from any such attempt. I would respectfully submit, however, that while I hold with Freud in believing that there is a certain amount of displacement and significant psychical association often strange in its direction, I believe

also that there are spatial associations, based upon the cerebral anatomy, in which there is a dragging in of neighboring cells, an embracing of marginal areas, as it were, thereby producing much of the freakishness of the dream phenomena. To accept this idea it is necessary to conceive of all brain records as being permanent even when psychically unregistered at the time of reception. This I believe to be amply demonstrated by a study of the neuroses.

In the dream as in conscious life, the stimuli are many, but in the dream there is no selecting, directing, inhibiting control; the picture groups become vague or fragmentary and confused, and the result is what we know. But it is to be noted, also, that the real difference between the conscious memory and the dream picture is not in the confusion of the latter, for this probably exists in our wakened state as well as in sleep. The difference lies in the fact that in the normal conscious state we have learned to inhibit and ignore those pictures not useful to our purpose. We select from the jumble of material offered, holding to some, rejecting the rest, and finally establish in the ordered mind the finished succession of pictures desired. It is the absence of the conscious control which gives the dream its chief value, permitting the appearance of memory pictures from the subconscious which in the conscious life would be inhibited. At the same time fortunately for our rest, and unfortunately for a complete knowledge of all the subconscious impulses, this loss of inhibition is not always evident, for while in sleep there can be no active inhibition, there must be a passive tendency—not to form unaccustomed brain patterns. Habitual conscious inhibition will have resulted in tendencies in effect, which remain as such even in sleep. Freud makes constant use of the term censor and explains by the presence of this inhibiting force the peculiarities of the dream—the suppressions and displacements; but the censor of the dream to me is a negative condition not an active force, and is to be explained not as a psychic activity but as a lack of the emphasized brain patterns necessary for facile response to the stimuli. Finally, the lack of the inhibiting, directing control in sleep is closely paralleled in the diseased mental reactions of the neuroses and it is this fact which makes a study of the dream life contributory to our knowledge of mental disease.

It is interesting to note that in this activating of memory

patterns by a stimulus we find the explanation of that puzzling phenomenon, the instantaneous dream. One is awakened by a sudden noise—but we have already dreamed and the noise is the logical conclusion of the dream. How can this be? Simply that the dream is a picture, not a sequence of events, and the noise has been appropriate to that picture and, by association, has stimulated it into existence. It is a flashing view which we have seen and has occupied that second or so of time between the sound itself and the recognition of it by our interpreting prefrontal cells.

One thought more as to the psychic value of the dream. It may be questioned as to how we are to know what the dream has actually been. We can not know, it may be said, the actual dream contents; we can only know what we, looking back from the conscious state, think they were, and if we are studying not our own but another's dream we can not even know that this other has correctly reported that which is remembered. All of this is true, but what one can tell of the dream, what one does tell, if told honestly, is still of full psychic value. Indeed, if the dream relator elaborate in the telling, if he but elaborate honestly, his dream thereby becomes more easy of correct interpretation. If, as we believe, the dream may represent a latent subconscious memory, the relator will have a tendency to emphasize subconsciously the psychic value of this memory, will "read into it" something of the original thought or emotional content, and as the discovery of this thought or emotion is our desire, our work is thereby facilitated. Let me illustrate in waking life.

One has an experience which produces a certain emotion within one. This experience is related, but if told exactly as it occurred one's hearers might be left cold. We wish to produce that emotion in our hearers which we have ourselves experienced and so we alter our relation away from the actual fact but toward our own psychic impression. In doing so we are actually falsifying in a desire to be more truthful! We feel that alteration is necessary in order that our recital shall transmit the correct impression. Now it is not claimed that in waking life this is a desirable state of affairs. When we hear about things we prefer having the unadorned facts from which we can draw our own deductions, but this is because the facts are what we want—they themselves are the object of our inquiry. In the dream it is different, the facts of the

dream are of little interest; what we want to know here is something of the relator, the dream teller, and when he alters the dream to correspond with the emotional content which he subconsciously has discovered he is directly aiding our investigation.

To sum up. Rest is for the removal of fatigue. Sleep is an obtunding of the brain cells for the purpose of rest. The brain cells concerned in the higher intellectual acts are more liable to fatigue than are those concerned in perception. Sleep, being there more required, may be assumed to be deeper and longer in the region of the higher intelligence and shorter and lighter in the perceptive areas. The higher centers may then remain dormant while the perceptive areas have become receptive to the stimuli, cœnesthetic, kinæsthetic and special, which reach them over the afferent nerve tracts. Through phylogeny and ontogeny, through habitual production and through vividness of original impression the formation of certain cell groups is facilitated. Memory patterns are formed to lie dormant until reawakened by stimuli similar to, or associated with, the stimulus of original production. These memory patterns aroused to activity during sleep, confused, and fragmentary, and interlaced, constitute the dream as we know it. Finally, the dream though not originating in impulses from the subconscious is still a cerebral product, and is of full psychic value as a revelation of the existing brain patterns which stand for our experiences of life.

CLASSIFICATION OF HEART DISEASE.—Leclercq points out the simplification of indications in heart disease if we class the cases as those with cardiosclerosis, with cardio-arteritis, or with cardio-atheroma. Sclerosis of the heart and aorta indicates a grave outlook, with complications from hypertension and impermeability of the kidney. Treatment aims to aid in the elimination of toxins. In the cardio-arteritis group, the prognosis depends on the infectious cause responsible for the inflammation, mostly rheumatism or syphilis, and treatment should be directed to this cause and to the ultimate asystoly. In the atheroma cases, the prognosis depends on the slow poisoning of the system from lead, tobacco or alcohol, or on senile changes. Treatment here should be addressed to the poisoning or should be restricted to simplifying the diet and mode of life to conform to the reduced functional capacity of the heart and kidneys. This classification according to the physiopathology corresponds much better to clinical experience and desiderata than the classification of the textbooks, as it not only identifies etiologically, anatomically and clinically each case encountered, but furthermore indicates the proper treatment and lifts the curtain before the future.—*J. A. M. A.*

HEREDITARY SYPHILIS.

BY

C. S. RAUE, M.D.

As a result of syphilitic infection from the mother the infant may be still-born without manifest lesions of syphilis. Spirochaetæ may, however, be demonstrated in the internal organs. Usually such an infant is premature or underdeveloped. The skin may be macerated but this is not absolute proof of the existence of syphilis. However, in the majority of cases syphilitic still-born infants or those dying shortly after birth show enlargement of the spleen and liver and bone changes (epiphyseal osteochondritis).

The classical manifestations of syphilis which develop after birth are palmo-plantar pemphigus, coryza, cutaneous syphilides, cachexia and epiphysitis. These symptoms develop in the order named, and it is important from the standpoint of diagnosis and treatment to have a proper understanding of the evolution of the disease.

Pemphigus may develop in the fetus during the sixth or seventh month. It is, therefore, usually present at birth and represents the earliest clinical manifestation of syphilis. The lesions consist of bullæ about one centimeter in diameter, situated upon the palms of the hands and soles of the feet. The epidermis is loosened from the true skin and has a bleached macerated appearance. While the bullæ are intact they contain a yellowish fluid. The bullæ soon dry up and the epidermis falls away, leaving a raw copper colored surface.

Coryza is one of the most constant manifestations of syphilis. It develops shortly after birth, that is, during the first three weeks. At times it is the only symptom present, the child appearing to be in good health otherwise.

The earliest manifestations are a serous nasal discharge which later becomes sero-purulent. The nose is obstructed and the infant's respirations become noisy and embarrassed. The discharge is irritating and leads to erosion of the skin about the nares and mouth with the development of fissures in these localities.

Cutaneous syphilides appear shortly after the coryza. They consist of pink, oval macules more or less general in dis-

tribution. At the end of a few days they become copper colored and desquamate. Wherever these lesions are exposed to moisture, especially about the buttocks and about the mouth, their surface becomes macerated and they increase in size and become converted into ulcers and fissures.

If the infant does not receive prompt medical attention it soon loses weight, becomes anemic and develops a characteristic grayish-yellow color—*le teint café au lait*—due to the anemia and profound hepatic disturbance. The liver and spleen are usually enlarged. A hemorrhagic tendency may be present. Death from marasmus usually supervenes. If, however, the early stages are benign in character or have been controlled by treatment but not entirely eradicated, there may develop later such manifestations as epiphysitis, meningitis, hydrocephalus and interstitial keratitis.

The early recognition of hereditary syphilis and the early institution of specific treatment influence materially the prognosis. As we are dealing with one of the most severe forms of the disease it is necessary to resort to energetic treatment. In the majority of instances prompt improvement is noted from the administration of mercury either by mouth or by inunction. The latter method is preferable since it does not induce diarrhoea and since it acts quicker. Ten grains of unguentum hydrargyrum daily until the symptoms have been controlled is the usual dosage required. The inunctions may be discontinued for two or three weeks and then resumed for two weeks, keeping the child under treatment for at least a year. During the remissions in the mercurial treatment, potassium iodid, saturated solution, 2 to 5 minims t.i.d. may be given for the visceral lesions which are always present in these cases, *i. e.*, diffuse gummatous infiltration of the liver, spleen and sometimes the lungs.

In cases which do not promptly respond to mercurial treatment, or in the more severe forms presenting such conditions as destructive changes in the nasal septum, rapidly progressing inanition, involvement of the eyes or of the nervous system, recourse should be had to the more quickly acting arsenical preparations. Of these neosalvarsan is the one to be preferred because it is less toxic and irritating and may be given intramuscularly in oil. Holt advises giving either salvarsan or neosalvarsan intravenously using one of the scalp veins for this purpose.

The dose of salvarsan is .05 gram for an infant one to three months old and 0.1 gram for three to six months. Holt allows 0.01 gm. per kilogram of body weight. The dose of neosalvarsan is $1\frac{1}{2}$ times that of salvarsan. The injection may have to be repeated at the end of a week.

As soon as the urgent symptoms have been controlled mercurial treatment should be resumed. The Wassermann reaction may be employed in order to control the treatment but it must be remembered that the reaction is often absent in syphilitic infants during the first month and under such circumstances it is of no value.

THE AMBULANT TREATMENT OF RECTAL DISEASES.

BY

HARRY B. ADAMS, M.D., PHILADELPHIA.

Read before the Germantown Homoeopathic Medical Society.

THIS topic embraces hemorrhoids, pruritus, fissure, fistula, specific, tubercular and cancerous diseases of the rectum; some of which we will only cover in a brief way; while others, particularly hemorrhoids, I will endeavor to present to you more fully. First, because they form the major portion of rectal cases and, secondly, because of the brilliant results obtained by the injection method.

We will not go further into the etiology of hemorrhoids than to state that they are primarily a varicosity of the hemorrhoidal plexus of veins, with the exception of the hypertrophied anal fold.

For convenience we will classify them into two great divisions, the external and internal. The former (the external hemorrhoid or thrombi) is simply a ruptured inferior hemorrhoidal vein, with subsequent extravasation of blood into the surrounding tissues, forming a distinct clot, as a rule, or, numerous small ones. The treatment in either case is incision with evacuation and subsequent packing the wound. Let me here state that the injection method is not admissible under any circumstances in this class of cases.

Internal hemorrhoids are divided into three varieties:

I. Capillary formed by the junction of the arterial and

venous terminals, and readily diagnosed by their predisposition to bleed on least manipulation.

II. Arterial which is seldom found, diagnosed by the pulsations and pump-like hemorrhage. These varieties should never be injected, but cauterized argenticum intricum, acid nitrate of mercury, fuming nitric, etc.

III. Venous consisting of a varicosity of middle and superior hemorrhoidal vessels. This is the most frequent variety and the one in which the injection method is applicable.

Internal hemorrhoids may exist for quite a period of time, without the patient's knowledge. Indeed, they may not be conscious of the fact until the dilated veins have protruded beyond the sphincter; as the veins up until now have retained their tonicity and are readily able to empty themselves. The continuance of this distention will soon cause the vein to lose its tonicity, with the result of permanent dilatation and protrusion, not only at but between stool. This constant prolapse will soon cause a resultant irritability of the external sphincter; which, if allowed to continue, will convert it into an involuntary muscle. The prolapsing hemorrhoids are now held firm by our muscle and strangulation and sloughing, and if allowed to continue a fibrous tumor will result.

In all our cases of hemorrhoids it is first necessary to search out the etiology and correct it whether it be due to constipation stricture, malignant disease, portal obstruction, pregnancy, displacement of the uterus, tumors, etc. In this paper we will simply deal with those cases amenable to the ambulant treatment. Here the cause will be frequently found to be due to constipation with an associated sphincterismus. Our procedure here should endeavor to first relieve this congestion. The ideal way is by digital manipulation under nitrous oxide anaesthesia. By this method you are not so likely to tear your muscle and render your patient incontinent, as may happen with a metal instrument, as your finer sense of touch allows one to judge the amount of dilatation necessary without permanently destroying the usefulness of the muscle; for distention to the point of laceration will cause a state of incontinence. In fact it would be far better to sever the muscle with the knife, as there would be more chance to restore continence after this procedure, than with a laceration of the fibers.

Our object, therefore, is to simply destroy its irritability and still allow it to perform its physiological functions. This being completed you will inform your patient to rest easily for the next twelve to twenty-four hours and report to you in a few days for treatment. On inspection you will find the congestion relieved with a marked relaxation of the rectal mucosa, caused by a lack of tonicity of the veins, and without further treatment a true case of piles would only be helped temporarily. For sooner or later they would lapse back into their former condition, becoming more fibrous in nature and less amenable to treatment.

Here I wish to call your attention to the value of the injection method, for I am convinced it is the most scientific treatment of hemorrhoids yet perfected; and by the following technique I will endeavor to explain why. After introducing the speculum and cleansing the field with an antiseptic, expose one of the tumors, and with a sterile needle introduce your solution into the sub-mucous tissue, just without the sheath of the vein, your solution matters little, as long as it has a mild inflammatory action. The solutions used vary, phenic acid 1 to 10 per cent., mild solution of fluid extract of ergot with phenic acid and glycerine, phenol 15 to 45 per cent., etc. The important point to remember is to inject your fluid *into the sub-mucous tissue* and not into the vein, for if the latter should occur, it would be carried off into the circulation with grave danger of a thrombus being formed, and here is where so many have erred and brought about criticism of this method.

Allow me to try to point out to you the advantages of this method.

- I. Patient is able to continue daily duty as usual.
- II. No ether or hospital.
- III. No suffering as occurs with clamp and cautery and ligature operations.
- IV. No danger as to life.
- V. No destruction or removal of the hemorrhoidal plexus of veins, hence no extra burden for remaining vessels; but on the contrary, the vessel resumes its course and performs its function just as nature intended.

Now, you may ask, how does this happen?

First, your injection is a mild irritant, which, when in-

jected, produces the formation of a plastic exudate, and an increase of leucocytes to the injured vessel. The exudate will splint our vessel and there will be a gradual contraction restoring it to its normal position. And our injured vein we all know will be benefitted by the leucocytosis.

I do not claim that this method can be used in all cases, for there are about 15 per cent. which will require a radical operation. That is where you have a case where the tumors have all become fibrous. Here the injection method would not only be useless but dangerous, resulting in an abscess or fistula.

Let me here append a few cardinal negatives:

- I. Never inject a fibrous tumor.
- II. Never inject an external pile.
- III. Never inject an area over sphincter.
- IV. Never inject with an irritable sphincter.
- V. Never inject more than one tumor at a time.

Now in considering the remainder of rectal diseases we will simply give a brief resume. Fistula for the most part are distinctly surgical and require radical hospital interference; except those sinuses which are straight, and without bifurcations, presenting one opening on the skin and one in the mucous membrane, and also those in which you hesitate to inflict an injury necessary to cure by the knife. This is particularly true of what is known as the horse-shoe variety, in which cases you will find your tract tunnelling around almost the entire circumference of the rectum and presenting two or more openings above the sphincter muscle. Division and excision here would surely result in incontinence. In such cases I think it far better to proceed along conservative lines, keeping tract drained and cleansed. By such procedure you will keep your patient comfortable and save them the torture resultant upon incontinence.

In first considering our next topic "pruritus ani" we must remember it is a symptom not a disease. It might be interesting to state that the etiology is varied.

I. Reflex causes as from absorption of toxins from the alimentary canal.

II. Constitutional as gout; diabetes.

III. The external causes under which heading we include pediculi, localized eczema, blind sinuses originating at the bottom of the "Crypts of Morgagni," and the more re-

cent theory that most cases are due to a bacillus lately isolated, termed the "streptococcus fecalis," a vaccine of which has been lately introduced into the market for experimental purposes.

I am not able at this writing to give any report as to its value, as I have only used it on about a dozen cases, and here have combined it with local treatment with good results.

Personally I have found that hemorrhoids, proctitis, and anal ulcers have been responsible for a great many cases and after relieving the existing condition, the *pruritus* has entirely disappeared.

We will not dwell further on fissure than to state they are readily cured by thorough divulsion with after cauterization, providing they do not extend up to and above the internal sphincter. Here division through base of ulcer is indicated.

Our last consideration is stricture, which is simply the result of some pathological condition, causing a deep ulceration as syphilis, tuberculosis or cancer, or to the removal of too much rectal tissue at operation.

Cancerous strictures are only treated ambulantly after the disease has progressed too far to be benefited by radical means. Many inoperables are kept comfortable by systematic bougieing and antiseptics. Keeping canal cleanly and sealing up any bleeding areas, thereby preventing, as nearly as possible, absorption and autointoxication. About the same may be said of the tubercular, and syphilitic cases, that is, keeping canal cleanly, and of good calibre, together with the indicated remedy or specific. It may be interesting to state that most of those of syphilitic origin, present a peculiar form of stricture, resembling a cork screw, and the bougieing of such cases is quite difficult.

ECLAMPSIA.

BY

L. D. BROUGHTON, M.D., BROOKLYN, N. Y.

(Read before the Homœopathic Medical Society of the County of Kings,
Brooklyn, N. Y.)

IN August, 1917, I was asked to take care of a maternity case for a colleague who was ill. I saw the patient about 8 o'clock in the morning and she had then been in active labor most of the night, the os was soft and dilating, the amniotic sac was unbroken, the pains were not exactly regular but were satisfactory, the fetal heart was strong, it was a primipara at full term. She was a slim woman, twenty-three years of age, of the nervous sanguine type, cheerful, anxious for the birth to be finished, not at all apprehensive and with a nurse who appeared to be of the helpful kind the outlook was satisfactory. I remained with her watching the effect of the pains, she chatted as though in perfect condition and when the pains were on would merely strain a little, show no apparent suffering, and when the strain was over seemed to be—I have seen many other women in like situation—relieved of the tension and not worrying about the outcome. I had not seen the patient before, knew nothing of her previous history, did not know whether there has been any urine examinations, and I accepted the case on the assumption that I was dealing with a normal labor, and as I had been in the same position many times before and came through all right I did not anticipate any different result.

At 10 o'clock while I was sitting by the patient I noticed a sudden twitching of the lip and in ten seconds she was in the throes of a convulsion. It was like a stroke of lightning. I do not know of anything quite so startling and quite so disturbing as this frightful effort of a patient's muscular system to tie itself up in a knot all at once. I have seen many cases of epilepsy, and I have had the misfortune to watch a few cases of uremic convulsions without labor, but when one sees a woman in the grip of such a series of muscle spasms and know that there is a life within her uterus that is ready to emerge into the world and become a human being, it is a most agonizing period. A second convulsion followed the first and the condition seemed as though there would be no

interim between the spasms and with the nurse holding the limbs apart it was easy to place the forceps on the child's head, which was low down and against the perineum, and the baby was safe within three minutes after the first convulsion.

When a man goes to a case prepared for possible exigencies he is in a position to think, but when a physical earthquake comes upon him as such a case appears to be he is apt to be unnerved and I make no excuses for being in that condition. It is easy enough for a man to say, after it is all over, "Did you take the patient's blood pressure?" "Did you test a specimen of her urine while you were waiting?" I simply did not and there did not appear to be any reason to do either.

I gave this woman high enemas of a solution of bi-carbonate of soda, a high enema of a 4 per cent. solution of glucose, she had two hypodermic injections of ten minims. of tincture of *veratrum viride*, she had hot packs, I gave her spoonfuls of bicarbonate of soda solution, a dram to the pint, by the mouth when I could get her to swallow, but do not believe the treatment had any effect. She went on until about 5 P. M., having eight convulsions in all, when she dropped into a comatose condition. She was dull during the night and occasionally had a twitching of the muscles as though the whole thing was on again, but there were no more real convulsions and she made a good recovery.

In the early days of my practice in Brooklyn I was engaged to take care of a young married woman, about twenty-eight years of age, and she came under my observation in the third month of pregnancy apparently in good physical condition. She was a school teacher, had been married less than a year when I saw her first, continued teaching and going on with her daily occupation as usual. She was different from the usual teacher, she closed her books in school at 3 o'clock and paid no more attention to her work until she opened them again the next morning at 9 A. M. They had no direct interest to her in the interval and her work could not be blamed for any of her after troubles. About the fourth month she began to show an edema of the feet and limbs and despite my attempts to reduce the swelling and increase the urine flow she kept on increasing in size until, at the sixth month, she was practically edematous all over the body. Her

appetite was good, she was sleeping and acting well, she showed nothing but the discomfort of the size. I tell this story without any feelings of pride as when I look back upon the case in the light of my present knowledge I feel that I was lacking in my attentions, that I practiced too strongly the belief I had then of expecting everything to come out all right if we would only give it time. When the pregnancy had reached six and one-half months I hoped that it would go on for another two weeks and then we could have a viable child, and waited expectantly. At that time I was sent for in a hurry and found her in convulsions. I called for assistance and gave the husband the names of two homœopathic physicians and said to get either one of them. They both came. We consulted over the case and as the young woman appeared bright and comfortable we had almost reached the decision to wait before doing anything when the whole thing started up again and she had convulsion after convulsion. We gave her chloroform and took turns in dilating the os manually. If you have ever tried to do this discouraging method of dilating an os at this period of pregnancy you will know what it means. It took two hours of constant finger pressure within the cervix before it was possible to pass the hand within the uterus to grasp a foot and deliver by version. When the operation was finished the two homœopathic physicians told me that the best remedy under the circumstances was a patent medicine. I do not tell this with any desire to cast reflections on their loyalty to homœopathy but to show that when it comes to the need for a splint to hold a broken bone, or for a diuretic to drive the kidneys to greater effort they were not bound by prejudice. The medicine suggested by them was known as Hunt's remedy for dropsy, the principal ingredient of which was apocynum canabium, which we all know for its action as a diuretic. I will say in passing that I have tried apocynum since then in the ordinary form as a diuretic and it has always seemed to me to have a bad effect upon the heart. The man who put up this form of diuretic must have had some other remedies with it to overcome this effect as I have used it many times since with excellent results. I cannot remember the amount of urine that was passed by my patient during her uneventful convalescence, but it was gallons, so much that when the nurse would show me the chart every day

I simply was in awe. The patient made a good recovery and has had no children since that rather discouraging attempt.

In reciting these two cases I desire to call attention to the fact that they are not new, that you have all probably had similar experiences, that I have seen other cases, but they represent such entirely different types of eclampsia that when a man says he has a treatment that is suited to all cases we are apt to think that such a happy result is far from attainable.

The various methods suggested for the treatment of eclampsia: *veratrum viride* to bring down the pulse rate to a reasonable number of beats per minute, chloroform to control the convulsions, morphia and chloral for the same effect and probably the most relied upon procedure of emptying the uterus have all been used and yet it is admitted at the present time that the hospital records show a maternal mortality of between 33 per cent. and 40 per cent. It is a question not easily answered as to just what the total percentage is as many cases occur in private practice and are never reported, and it is asserted that the cases that get to the hospitals are in extremis and too far gone or too toxic for any form of treatment to be of any avail, so that while the percentage of the hospital treatment is very high it may not represent the total.

At one of the New York maternity hospitals of Manhattan a method of treatment of eclampsia has been adopted that has been used with increasing success at the Rotunda Hospital of Dublin and at one of the Petrograd Hospitals and might be described as a treatment by the use of morphia pushed to a limit. The Dublin Hospital claims to have reduced their mortality from 33 to 13 per cent. and the indications are that this may be equalled by the New York institution.

The treatment is the use of morphia at the commencement of the convulsions, one-half grain being given as soon as it is possible to administer it and one-quarter grain is given every hour until the convulsions cease. The patient is allowed to work out her own case, no attempt being made to aid the labor, and the treatment is entirely expectant. In most of the cases in New York at a usually limited period the labor is terminated without assistance, the other cases wherein labor does not come on are allowed to come out of the sedative in most cases with the functions of the body improved and if it

is not term and conditions permit the patient is allowed to go home or kept under observation and labor permitted to go to full term.

The limit to the use of the morphia is about when respirations are slowed to eight per minute although one case is mentioned where the respirations were down to three per minute when five grains of morphia had been administered, but the patient came through all right and made a good recovery. The satisfactory element of this treatment is that it does not require hospital assistance but can be used at any home where there is a competent nurse, and for this obvious reason time is saved and the patient's chances improved.

As adjunct of the treatment the stomach is washed out and when emptied a small amount of castor oil is administered through the tube, and high enemas of 4 per cent. solution of glucose are passed into the bowels, several gallons being used where possible.

One interesting point that has been brought out by this treatment is that the morphia does not seem to have any effect upon the child. Not one case has occurred in the New York series covering more than sixty cases where the child has shown any effect of the morphia, all of them crying lustily at the time of birth. This result is in such direct contrast with the so-called effects of morphia in the twilight sleep cases where it was supposed that the danger to the child was from the morphia that it is worthy of comment.

The points to be remembered in considering this method are that it is not to be used until the convulsions actually appear. If a case is in danger of developing the extreme results of a toxic condition it must be considered from its own standpoint. If it is at term, or near enough to be safe and there is high blood pressure, inactive elimination by the kidneys, acetone uria, edema, headache and shows a very probable invasion of a convulsive seizure it should be terminated by the usual methods of forcible delivery, but when it is during the mid-months it should be carried along with the usual eliminative treatments seeking the freeing of the system of the toxic elements where possible and the morphia used when the convulsions come on, and even then not to carry the treatment to a delivery stage if it can be avoided. If the convulsions cease and there is sufficient gain to warrant the risk the case is to be allowed to go on to term if such a result can be attained.

THE EPILEPSY PROBLEM.

BY

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THE problem of epilepsy seems to stare at us like an oppressive memory from the misty past with the same sphynx-like expression that characterized it then, sphynxlike, because in the light of present day theories, the problem remains unanswered. The uncanny and weird spectacle of the epileptic fit so impressed the ancients, that they in their fertile imagination ascribed supernatural significance to the condition, looking at it as a visitation of the gods and terming it the "morbus sacer." The treatment was in line with their conception of the cause. And so we find that they directed their attention toward driving out the evil spirit or demon from the body of the possessed one, the epileptic. The remedy consisted in the application of red hot irons, flagellation and other forms of tortures. The wailing of the wretched victim was answered by the statement that it was the evil demon within the patient who was writhing and crying out in agony and not the epileptic at all.

We no longer strike our epileptics insensible with a physical club, we have advanced too far and methods have changed with such advancement. While we now employ more scientific and subtle acting sedatives and suppressives, we are not less fettered by superstition than were our forebears. The modern treatment of epilepsy is not less inefficient and not less maddening than was the ancient method. Our superstition is the bromide superstition. Bromide brutalization continues despite the fact that neither cure or benefit of epilepsy can be put to the credit of bromide. The epileptic and the experienced epileptographer have long ago come to the conclusion, that it was better to have epilepsy than bromism. Aside from the various well known untoward effects of prolonged bromide ingestion, by far the most demoniacal effect is the gradual mental deterioration of the patient. The patient becomes listless, sluggish, irritable, perverted in desires, unreasonable and passes through varied stages of mental decay to ultimate insanity. That is the price at which temporary freedom from attacks is bought. The insane asylums throughout the country harbor the living proof of this assertion. Investigation of

the histories of the epileptics confined there, will reveal the fact that bromide saturation played the heavy role in the misery of these patients. I sometimes wish that I were able to present the condition in language so flaming and so graphically as to create a lasting stimulus for reflection upon the minds of the bromide advocates. I would want to present in some concrete form, in some tangible way, the heartaches, the disappointments, the tears and the trepidations and the amount and variety of drugs consumed, the money wasted and all the other elements which paved the road to the asylum, which constituted the hand closing the asylum gate upon the epileptic victim. I would want to paint in glaring colors all these features and then ask the bromide prescribing physician whether the sight of such crying failures, the epileptic concluding his career of misery behind the walls of the asylum, might not induce him to discard his so-called remedy.

When we look over the various theories that have been advanced concerning the cause of epilepsy, we soon realize that all reputed causes are more or less speculative, being either coincidence connected with the patient's first attack or results of the disease. By fastening our attention to whatever condition happened to be most closely associated with the onset of convulsions, we jumped at conclusions. It is a demonstratable fact that all accredited causes of epilepsy may be scientifically proven incorrect. Concerning Jacksonian epilepsy we were told that it was due to head injury causing pressure upon the brain thus releasing the convulsions. The adherers to this theory operated on such cases in whose history head injury appeared, removing a section of bone overlying the area where the pressure was said to exist. The cause thus being removed, would lead one to expect that the result, the convulsions, were thus obviated. But alas, it was found that the epileptic attacks continued shortly after the trephining operation, with either undiminished or increased violence. At this stage, the unfortunate patient was advised to accept treatment for the epileptic habit. It was thus admitted that some other factor in the patient's system, independent of the localized pressure, was capable to cause epileptic seizures. The sad fact is, that the operation as well as the after-treatment have proven complete failures, not to be mitigated by any ever so learned discussion.

Let us turn the searchlight of logic upon Jacksonian epi-

lepsy. While the mentioned pressure is pointed out as the cause and this cause persists all the time the attacks do not persist, that is, they occur in the Jacksonian epileptic with as much irregularity as is the case in every other type of epilepsy, sometimes daily, and then again not for weeks or months; and again after the removal of the so-called cause, the pressure, the attacks do not abate. If the pressure were the cause, then the result of such pressure, the attacks, would be a constant symptom as long as the cause is maintained, in the same manner in which paralysis persists as long as the corresponding injury of the brain is maintained. This is, however, as we have seen not the case with the epileptic.

Others have noticed the frequency of constipation and intestinal disturbances in many epileptics. Based upon such observation, with unexplainable naivete, they advocated and performed abdominal operations for the relief of constipation by "straightening" of intestinal kinks, which were said to impede the elimination of bowel contents. It is deplorable that the supporters of this form of treatment have not ceased to perform abdominal surgery: deplorable because in spite of the abundant number of epileptics who have been induced to subject themselves to this dangerous operation, there has not been a single case of epilepsy cured. The promise which lured these patients to the operating table has proven false in every case. In the light of the latest knowledge concerning the cause of epilepsy, such operations have interfered with the recovery of the patient, because the inflicted surgery has added shock to the already disturbed system, shock which is a very potent element in the production and maintenance of the epileptic's metabolism, as we shall see later. Not one of the advocates of surgery for epilepsy will consent to submit case records for investigation. The abdominal operation is the most flagrant violation of reason, science and right. To realize more fully the worthlessness of these operations, one need only behold the large number of sadly disappointed epileptics, who, following surgical operations have remained as bad as they were before the operation, or have become worse. Thus far, no advocate of this form of epilepsy therapy, has dared to challenge my statement.

Briefly stated, the most frequently ascribed causes of epilepsy, all of which are erroneous, are: Heredity, syphilis, reflex irritation, traumatism, constipation, intestinal disturb-

ances and even a germ. Any of the mentioned conditions may be a contributory element in a given case of epilepsy but the specific cause of epilepsy can surely be only that particular element, which can be shown to cause epilepsy to the exclusion of all other accredited causes.

To illustrate, in tuberculosis the reduction of the patient's resistance, the exposure to inclement weather, the living in unhygienic quarters and many other features are important and constitute elements capable of arousing a latent tuberculosis, but none of these elements which contribute to the undermining of the patient's health, is the cause of the disease, the cause being always the bacilli tuberculosis. In the same manner an epileptic may be shown to have emerged from a very tainted generation, he may have been enveloped in the grasp of alcoholism, or neurosis, or may have sustained head injury, but all such and other conditions fail to comply with the law of specificity. Any treatment based upon false premises is not only open to criticism, but also doomed to failure. And such has indeed been the result of all forms of anti-epileptic treatment in the past. What then is the proven specific cause of epilepsy?

First it was found that when those abnormal conditions which are the reputed causes of epilepsy in mankind, were experimentally engrafted upon animals, these animals in every case, failed to react with epileptic convulsions, and again we met many persons who were afflicted with one or more of the conditions said to cause epilepsy, nevertheless these persons were free from the disease.

Certain foods when partaken of by epileptics, have been found to increase either the severity or frequency of attacks. This observation caused many doctors to formulate a restricted diet including the regulation of the amount of salt to be consumed by epileptics. The gist of such dietary is the recognition that something in the epileptic's economy possesses the power to extract from certain substances in the system, various poisons which in turn are carried by the blood to every cell of the body. The patient's brain is thus being bathed in poisonous fluids and registers this condition by the release of epileptic intoxication, dizziness, stupor, unconsciousness and convulsions.

The same kind of food and the same abuse of diet will not cause epileptic symptoms in other persons, that is in

such not afflicted with an epileptic metabolism. Instead of eliminating waste products and ridding the system of impurities, as is the case in the normal non-epileptic individual, the epileptic's blood has a unique affinity for such poisons, absorbs and stores the same and finally produces epileptic symptoms. In the light of such and similar findings we felt justified to disregard the generally accredited causes of epilepsy as causative factors and directed our attention to other and newer fields. There are two well defined sources whence epileptogenic poisons are obtained by the system, the external and internal. Poisons derived from food and waste products, the intestinal flora and from sources of infection present or suddenly thrown upon the system, are the external sources. Such would be represented by meat which furnishes putric material, foods which are improperly prepared or otherwise indigestible or contra indicated for a given case, or by the presence of pus or devitalized tissue in any part of the body, as in the nose, ear or diseased tonsils. The internal source is the more important and interesting feature. Here we are concerned with the activity of the glandular system. These highly specific products are essential for the proper maintenance of health and life. The harmonious function of the body organs is in a great measure influenced and controlled by these glands.

With normal glandular activity interfered, functions are perverted, growth thwarted, proportions lost, insanity and other grave diseases produced. Every gland has a function characteristic of itself and not shared in exactly the same degree by any other gland of the system. So long as the thyroid, for instance, secretes its peculiar product in proper manner, all is well, but when the normal progress of this secretion is interfered with to the extent of over or under production in respect to quality or quantity, serious consequences ensue. Goitre, stunted growth and mental derangement are some of the results. Such changes are due to the disturbed function of the thyroid gland which has ceased to pour into the system that peculiar material in just the required proportion which formerly maintained normal equilibrium.

Disturbed internal secretion charges the system with intoxicating poisons. Aside from the observation that the epileptic readily succumbs to attacks under the influence of emotion and shock, other facts have established the conviction of

the very intimate relation between secretion and emotion. Witness a person's inability to swallow or speak under the influence of excitement, as in so-called stage fright. Based upon this phenomenon is the Chinese rice ordeal. It was customary to compel the accused who came before a judge, to eat a bowl of dry rice. The suspect's inability to do so was considered evidence of his guilt. Rice requires a good deal of saliva in the act of swallowing but owing to the accused's fear and state of emotion, salivation was arrested (parotid gland) and eating of the rice impossible. It is well known that as the result of fright, bowel and bladder contents may be suddenly voided and that the thought of food may stimulate secretion of gastric juices, or "make the mouth water" and that in severe cases of surgical or mental shock (emotion upon hearing news) glandular activity may be so altered as to cause mental derangement. Not only may shock pervert the normal secretions to the end of causing disastrous results, but there are instances which compel the conclusion, that shock, under certain conditions, may so stimulate glandular function as to rearrange the defect and restore normal glandular activity. The changes are in respect to osmotic pressure and qualitative and quantitative as well. The subject is not merely interesting but too important in connection with epilepsy to justify its dismissal at this point.

At a medical meeting one doctor asked me to reconcile the following occurrence with my theories and contentions regarding epilepsy: An epileptic, afflicted for many years and in whose case the ordinary remedies proved unsuccessful (as usual), fell from the roof of a building upon which he had been working, and sustained fractures of both legs. Dating from this accident the epileptic remained free from all attacks for the years following. This incident strikingly substantiates the contentions as to shock and secretions championed by me for years. The shock inflicted (mental and physical) by the fall, so stimulated glandular functions that they ceased in their inharmonious activity and started to pour into the system the required secretions. These substances neutralized epileptic poisons present (acted as antidote) and no longer did abnormal glandular secretion replenish the store of poisons in the blood. Recovery from epilepsy in this particular case, was brought about, I think, by stimulation of the glandular system (through the sympathetic nervous system) by virtue of the

sustained shock. Spontaneous cures of epilepsy are not unknown. Epileptics who have been subjected to some infectious disease, as scarlet or typhoid, sometimes recover from the intercurrent fever and the epileptic condition simultaneously. This is due to antitoxins automatically formed in the system (under rearranged glandular secretion) by the combination of the organism of the particular infection and epileptic toxins. We all know that the milk of a cow, which has been abused, will often reflect disastrously upon the infant partaking of such milk, causing colic and convulsions; and we know that the milk of a nervous mother, one who fails to live content, experiences shock and bears a great sorrow, that such milk is very apt to exert bad effects upon the nursing infant. We well remember that in our boyhood days the appearance of jaundice in our playmates was followed by the advice of some neighborly old woman, to the effect that the patient should be frightened in order to "scare him out" of the trouble. And we recall that in cases where this advice was acted upon (by some one suddenly jumping at the patient with a shout) that many times the yellow complexion subsided promptly. This is not a brief for that form of treatment for jaundice, neither will I say that the patient did not recover in spite instead of on account of the treatment.

Whatever the case may have been, the advice had a healthy and scientific basis which doubtless was beyond the ken of the well meaning old lady, but still attached to the treatment. In all these and many other instances which could be cited, the intimate and most vital importance of internal secretion and emotion or shock, is demonstrated. The stranger is the attitude of those who, recognizing these facts, fail to extend its application or deductions to the field of nervous and mental diseases or to epilepsy in particular, with which we are here concerned. For the close and unbiased observer all these indications and the old woman's remedy, constituted the writing on the wall, enabling him to discern facts which escaped the superficial observer.

For the purpose of completeness we pay passing attention to the statement recently made by a Cincinnati physician to the effect that he had discovered the bacillus epilepticus and that the disease was communicable. Briefly stated, the proven facts are that Bra and one of her co-workers found this identical germ in the blood of some epileptics and described and

depicted this discovery about twenty years ago. The germ heralded as a new discovery by the Cincinnati doctor is the *Bacilli* of old and is an incident, but never the cause of epilepsy. The exact laboratory methods have proven the germ and communicability theory of epilepsy myths and these proofs are acceptable to every bacteriologist. (Those who would examine these papers more closely see *Med. Council Phila.*, Oct., 1916, and *Pacific Med. Journal*, Nov., 1916). The intestines of all persons are laden with millions of germs. The previous mentioned affinity of the epileptic's blood for infectious material and waste products, exercises no discriminating, no selective function, it seizes for filth upon any available source, hence germs will at times find entrance to the blood.

Koch's law, roughly stated, sets up the maxim that the specific cause of a disease is that particular element which may be obtained from the infected patient and transferred to other systems, in which it must produce the same diseased condition and so on ad infinitum. So to find the specific cause of epilepsy, the cause which may be shown to bring on the attacks under exclusion of all contributing or aggravating elements, we must be able to extract from the epileptic a substance which upon being engrafted upon the human or other animal, results in epileptic symptoms. We conducted experiments with the blood of epileptics and after years of such research extracted from the same a serum which possessed very peculiar and interesting features. When this serum is injected into an epileptic, he will respond by either promptly succumbing to one of his epileptic attacks or will in other manner demonstrate the presence of a material capable of ushering in the epileptic state. If no attack occurs there may be headache, dizziness, drowsy sensation, giddiness, depression, uncomfortable feeling or pain at the site of injection. If however the same serum is injected into a healthy, non-epileptic subject, none of the mentioned symptoms occur. This is so because the injected material in the body of the non-epileptic does not come in contact with the medium of its own kind, it remains neutral and is eliminated as so much foreign matter through the various avenues of the system. The same results follow injections of such serum in animals. If a rabbit receives two or more of the serum injections, the next dose, if given before the preceding one is eliminated, that is, in time to meet its own element, will produce epileptic attacks. The

animal suddenly stops eating, lies down, stretches itself, turns over and has a few quick spasmodic movements of the feet and throws the head far back, holding it in such position for about a minute.

The rabbit soon recovers, returns to its food and appears as lively as before. There are no further attacks at any time unless the animal is again subjected to fresh inoculation. Sometimes the epileptic symptoms caused, are not more than sluggishness of the animal which often sits in its cage, does not eat and oscillates the head sideward. This is epileptic intoxication short of the convulsive feature. Critics have suggested that the results here described might be anaphylactic reactions, that such results may be produced by the repeated injection of any serum or other albumen which reduces the animal's resistance to the particular protein, bringing about the symptoms. This is all very true of anaphylaxy, which sensitises, underprotects or exposes to the influence of certain proteins. But there are marked differences between anaphylaxis and the results obtained by epileptic serum injections. Under anaphylaxy the animal most often dies, and if it exceptionally survives, it becomes more sensitive with each subsequent injection, never acquiring immunity or a tolerance for the injected material. The animal never becomes so used to these injections as to bear one without succumbing. How different with epileptic serum when prepared properly. The rabbit does not die, it does not become easier with each following injection to effect the animal, but on the contrary, the rabbit lives through a goodly number of injections and finally recovers and can no longer be made epileptoid by injections. It is immune to epileptogenic toxins. Toxemia then causes epilepsy and the specific epileptogenic toxins are different, independent from any other toxins circulating in the blood stream or deposited in tissue. The epilepsy producing toxins are contained in the blood serum of the epileptic and can be dialyzed and separated from the serum as a ferment. It is tedious labor injecting one animal after another, changing concentrations of solution, drawing the spinal fluid from patients and making of various combinations. The fundamental principle which led to the success thus far obtained was the fact that the specific and responsible ferment was extracted from the serum. Other investigators have long ago expressed the belief that the epileptic's blood contains a toxin and a protective anti-toxin which

can not be separated in the circulating blood. This is a very important hypothesis despite the fact that spontaneous cures of epilepsy contradict the view of inseparableness of the two named elements.

The anti-epileptic serum ferment finally produced, combines absolute harmlessness with proven efficiency to supplant the objectionable bromides and other drugs, so long and so disastrously used by epileptics. Under the serum treatment the mental faculties of epileptics cleared with noticeable promptness as one of the first symptoms of the treatment: it seemed as if a cloud which formerly enveloped the patient, had been lifted.

The steadily increasing evidence of the serum efficiency is a heart cheering message. He who now speaks of the prognosis of epilepsy can no longer pronounce the horrible disease incurable with the same ring of positiveness which formerly characterized his announcement. The present generation witnesses the production of a specific anti-epileptic, the long looked for remedy rising from the laboratory of present day workers. The epileptic of today will be able to receive treatment with the same chance of success as is now obtained by the modern treatment of syphilis; and the coming generation will not be in position to even realize the great boon placed at their command; they will not be as keenly affected, for they will not have, as is the case now, harbored epileptics for prolonged periods. They will not have known the pangs imparted by the knowledge that some day death will compel them to leave their epileptic in the care of strangers, in the care of an unsympathetic world; they will not have traveled from one end of the land to the other, in vain search of relief; they will, all in all, accept the recovery from epilepsy as a matter of course without having experienced the heartaches of those who now care for epileptics. It is only by such comparison that the supreme importance of present day achievement along epilepsy research can in a measure be realized.

It is regrettable that the road to progress is beset with stumbling blocks and obstacles of the making of those who delight in retrogression. True, the efforts of all adversaries to a real meritorious innovation, can not prevail forever, but for a while progress is impeded. In scanning the pages of history we invariably meet instances where every new discovery

was met by the antagonism of the discoveries contemporaries. We read of those instances and our sympathy goes out to those who bore the burden of pioneer work, we regret that not more respect and so little reward was paid the laborers who worked for benefits which we all now enjoy. Still, in dealing with our own problem, we are as reluctant as ever in taking kindly to the new. A man may announce a truth which tomorrow will be so self-evident as to escape notice, yet at the time of making his announcement, he becomes so plastic as to arouse criticism and antagonism. Yet it is to the man who, by the very virtue of his standing out from the every-day nature labors against the current of conventionalism and refuses to accept the dictum of a world against his convictions, it is to him, to whom we are more indebted for real progress than to the multitude who placidly float down the stream.

Pasteur has achieved no less for the fact that he came near being mobbed at the time when his anti-rabific treatment was in its inception. Ehrlich, in our own enlightened days, found himself opposed by interests who actually strove to have a law passed prohibiting the production of what then was "606." Yet his discovery is being made use of in every village the world over. All such difficulties, all honest and dishonest antagonism have not distracted from the efficiency of their remedies nor from the credit which is now universally given the mentioned scientists. So we stand today on the threshold which leads to the only logical and practical therapy for epilepsy, the only, because it is, like no other, based upon the specific cause of the disease. Improvements may and will be made but at no other time before this, has the real cause of epilepsy been so well understood as now and never before have we been able to direct treatment to the cause of the disease with so much benefit and absence of harm, and never until the event of the anti-epileptic serum ferment have so many epileptics successfully been treated. This statement bears the earmarks of enthusiasm, but it is an enthusiasm born after having labored for nearly twenty years in epileptic research and having treated nearly two hundred cases by the new method.

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FIFTY-FOURTH ANNUAL SESSION

GASTRIC AND DUODENAL ULCER.

BY

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WE have in gastric and duodenal ulcer a lesion in which both the internist and the surgeon should be equally interested. These cases are true border line cases, many being cured medically while some demand surgery for their cure. While the greatest number of cases begin between the ages of thirty-one and thirty-six, cases do occur in the extremes of life. Some authorities believing that the malena and hematemesis sometimes seen in the new born is due to ulcer or erosion of the stomach or duodenum.

Duodenal ulcer is more prevalent than the gastric type; ninety-five per cent of which are located in the first two inches of the duodenum. The greatest number of gastric ulcers occur on the lesser curvature often extending both anteriorly and posteriorly and constituting the so-called saddle ulcer. The most frequent position is the posterior wall, then comes the anterior wall and pylorus in about equal numbers, the fundus and greater curvature following with equal honors.

I will not attempt to discuss the cause of stomach and duodenal ulcer. There are a great many theories as to the etiology with no positive conclusions. Five years ago an American and European Committee of prominent surgeons stated that while they had been capable of producing gastric and duodenal ulcers experimentally with characteristic symptoms, the cause in man is practically unknown.

It is quite possible that the causative factor may vary within wide limits in the individual cases. It is also probable that infection usually with the streptococci combined with the

action of pepsin and hydrochloric acid on the infected area play the most prominent causative role.

We will next consider the symptoms and diagnosis of the stomach ulcer. I wish to state here that it is not always possible to differentiate between a pyloric gastric ulcer and a duodenal ulcer as the symptoms are necessarily very similar. Pain is present in ninety-nine percent of all cases and with the associated symptom of local tenderness present in the same percentage of cases, constitute the most important symptoms. The pain bears a certain relation to the taking of food as well as to the quantity and quality of food.

The location of the lesion influences the interval of time elapsing between the taking of food and the appearance of the pain. The nearer the caria the lesion, the sooner the pain comes on after food, the nearer the pylorus the greater the interval of freedom from pain after food. So then, the onset of pain after food varies from a few minutes to two hours, the majority coming on after an hour.

The patient will first notice a distress or a feeling of a heavy load, then pain of a dull character gradually becoming burning and gnawing in character. At first it is in the epigastrium only and is increased by pressure. Later in the course of the disease there appears a pain gnawing in character situated in the back to the left of the spine on the level with the eighth or ninth dorsal vertebra and is strongly suggestive of gastric ulcer.

With the pain there is often a sharply defined spot of exquisite tenderness which indicates the position of the ulcer. If the lesion is on the posterior surface it will require deep pressure to elicit this tenderness. Nausea and vomiting occurs in eighty-two per cent of the cases and usually occurs when the pain reaches its acme and gives relief.

The patient may have regurgitations instead of vomiting. The vomitus is at first food and then hyperacid gastric juice. Hematemesis is present in from one-third to one-fourth of the cases only, and is pathognomonic of ulcer. Malena may also occur either with or without vomiting of blood and is about as frequent as hematemesis. The appetite is usually good but the patient fears the taking of food because it gives pain. He loses weight simply from starvation. Constipation is often present. Examination of gastric contents usually shows hyperacidity and the gastric juice is increased in amount.

There is no lactic acid present. These symptoms during the activity of the ulcer occur day after day and meal after meal.

After the ulcer heals or becomes latent these patients are liable to have a relapse or relapses. An acute ulcer often becomes a chronic indurated one, some of which if left alone undergo malignant degeneration.

In stomach ulcer we are apt to have a clean tongue, a good appetite, a circumscribed spot of tenderness, pains bearing definite relation to food, intervals perfectly free from pain and if hemorrhage occurs it is apt to be large and not frequently repeated. There may be loss of weight but no cachexia.

In stomach cancer the tongue is thickly furred, there is complete aversion to food, painful area over greater part of gastric region, the pains have little relation to the taking of food and hemorrhages if they occur are small and often recurring. We must also differentiate the reflex gastric symptoms due to lesions of other abdominal organs and severe forms of gastric catarrh and gastric neuropsychasthenia.

A typical case of duodenal ulcer gives a very orderly history over a longer or shorter period of time. The average duration of these cases from their onset until they reach the operating table is twelve years. His attacks last several weeks to a few months, sometimes starting with a chill, and are apt to occur in the spring or fall of the year.

For two or five hours after meals he feels fine and then there starts a feeling of fullness and distress in the epigastrium. He belches gas and often a sour fluid. This pain continues to get worse until he takes food or an alkali drink and often persists until the next meal. After the next meal he gets almost immediate relief for from two to five hours when the same symptoms recur. This train of symptoms is meal after meal and day after day during the attack. He eats before going to bed because it relieves him. He may take some crackers and milk to his room to take about 2:00 A. M. when his severe pain awakens him. Characteristically he has "hungry pain" relieved by alkali, by food and by lavage. There is usually a tender spot elicited on very deep pressure just above and a little to the right of the umbilicus. If you have the above symptoms in a case and they subside and recur again in a number of months it is safe to make a positive diagnosis of duodenal ulcer. The ulcer either heals to open up again or remains latent for a time. Dr. Wm. Mayo jokingly

remarked a few years ago that he would not think of operating a case that had not been permanently cured medically seven times. There are no stomach symptoms between these attacks and the patient is practically well.

In gall stone colic the pain is sudden and severe, has no relation to food but comes on any time of the day or night with the stomach full or empty, and after a longer or shorter terrific attack suddenly subsides, probably to recur again at some future date leaving the patient free from marked symptoms in the interval. There is also spasm of the diaphragm gas and upward pressure, usually vomiting of bile, and tenderness over the gall bladder.

A typical case of gall bladder disease or duodenal ulcer may have to be sent to the table with a diagnosis of a surgical lesion of the upper abdomen. The X-ray is a great aid in the diagnosis of ulcer and in picking out cases of midline ptosis of the stomach and transverse colon. These ptosis cases may cause symptoms having a relation to taking of food, as the stomach can't empty itself when the patient is in an erect position and she suffers from symptoms due to too long retention of food in the stomach. In ulcer cases pyloric stenosis from the contraction of scar tissue is a frequent complication and is always a surgical lesion. Fatal hemorrhage and perforation of the stomach or duodenum are complications liable to occur in any case.

A great majority of acute and sub-acute stomach ulcers are cured by the proper medical treatment and proper diet. Acute gastric ulcers are always medical until at least there is repeated hemorrhage or perforation. In perforation the case becomes immediately surgical. A case should not be operated immediately after severe hemorrhage during the marked secondary anaemia. Surgery has nothing to offer in these cases until the blood picture becomes markedly improved.

Mandel, of the Presbyterian Hospital, Chicago, gives the following indications for the surgical treatment of gastric ulcers. First: If the case is treated properly for two months without any improvement.

Second: The condition of pyloric stenosis is always surgical.

Third: Cases which continually bleed in spite of treatment.

Fourth: Cases of perforation become surgical at once.

It is the opinion of most surgeons and many medical

authorities that a duodenal ulcer is a surgical lesion from the time a positive diagnosis is made, as they seldom get well under treatment. An early operation in these cases would save much suffering, loss of work and expense to the patient.

Chas. L. Mix, however, advocates exhausting medical treatment before resorting to gastric-enterostomy. He says we did not formerly recognize these cases until they were so chronic that they were surgical. Now that we recognize them early he claims that they are as susceptible to medical as surgical treatment. Rest in bed and proper feeding are most important.

W. J. Mayo says when supposedly cured patients are operated during the quiescent interval the ulcer is not found cicatrized but unhealed. The X-ray shows the same condition. While no one would contend that every gastric ulcer should be surgically treated, we at least should argue that if permanent cure does not take place within a reasonable period, other things being equal, the patient should have surgical treatment.

I think we can safely say that if acute ulcers do not respond to proper treatment in a reasonable length of time they should become surgical.

If added to an ulcer history we get sudden severe pain, great general abdominal tenderness with marked rigidity, we can diagnose perforation and immediate operation is necessary to save life. The condition found and the margin of safety shown by the patient should determine just what you should do. Discretion is the better part of valor in these cases and the sooner you control the leak, drain the abdomen and get the patient to bed, the better for him.

The posterior or loop gastric-enterostomy of Monahan or Mayo either with or without excision of the ulcer is by far the most frequently indicated operation in these ulcer cases. We should be sure that a gastro-enterostomy is indicated or your patient will be made worse. If no ulcer is demonstrable by thorough search entering also the lesser peritoneal cavity through the gastro-hepatic omentum, and the pylorus is patulous do not do a gastro-enterostomy as you will aggravate your case.

A surgical ulcer can be felt and seen, if the margin of safety is good and the gastric ulcer can be removed without adding too much risk to the operation. I believe it should be excised or thoroughly cauterized with the Paquelin cautery and the opening closed. If in a position to interfere with the

proper motility or proper emptying of the stomach a gastro-enterostomy should be done also. It is not necessary or advisable to occlude the pylorus and he is not benefitted by so doing.

If, after opening the abdomen, no ulcer or stenosis is present look to some other abdominal organ, as the gall bladder or the appendix, kidneys, and pelvic organs, if pathology is found, correct it, if possible. It is not advisable to excise a duodenal ulcer as cancer practically never follows these cases.

Gastric ulcers, if not removed, quite frequently become cancers, and Wilson and McCarty after studying a large series of cases pathologically state that 71 per cent. of gastric cancers occur in the scars of ulcers, particularly in the overhanging edges. The duodenal ulcer should be infolded or covered with omentum and then your gastro-enterostomy will allow your ulcer to get well.

In 337 cases of duodenal ulcer traced by Graham after operation 70 per cent. were cured, 16 per cent. much improved, 11 per cent. fair, 3 per cent. not improved. Of 162 gastric ulcers, 59 per cent. cured, 22 per cent. much improved, 13 per cent. fair, and 7 per cent. not improved. A very good record considering the fact that all of these cases when operated were medical failures.

In conclusion I will quote from Coffee of Portland, Oregon, who, having carefully studied clinics, the literature on the subject, and after profiting by the records of a large series of operations of his own, makes the following statement:

"In the future all duodenal ulcers will be covered by omentum and a posterior gastro-enterostomy by the Mayo or Monyham technique performed without artificial obstruction. Or if in certain cases it is convenient to excise an ulcer near the pylorus with a Finney pyloroplasty. Gastric ulcers on the lesser curvature which are small and indurated, will be treated by the Balfour Cautey plus the Finney pyloroplasty or gastro-enterostomy."

"Large ulcers in other parts of the stomach will be treated by first doing a gastro-enterostomy or a Finney pyloroplasty followed by Sippy's plan of medical treatment, with a resection later, if necessary. Ulcers involving very large areas of the stomach may be given rest and the patient nourished by jejunostomy. Ulcers near the pylorus having a suspicion of

cancer will be treated by the Rodman operation done in two stages."

DISCUSSION.

DR. GEORGE B. MORELAND, Pittsburgh: I understood the quotation from Mayo to be that when an ulcer had been cured permanently by medical means seven times, he cured it surgically. I think the word "permanently" brings out his idea much better.

DR. NATHANIEL F. LANE, Philadelphia: Your quotation of Dr. Mayo is correct. He laid great stress on the permanent cure that must be made six or seven times before he liked to operate. When we have the classical symptoms, such as the essayist has described, the diagnosis of pyloric ulcer is, of course, simple; but when we have a case that is not typical, in which the symptoms may point to the appendix, to the gall bladder or to the stomach, it is impossible, I think, for anyone, no matter how expert, to make a positive diagnosis. Some years ago, I followed Dr. Deaver's clinics three or four times a week. He did a lot of work, and he was just as much at sea as any of the rest of us in his diagnosis when the symptoms were not classical.

Had I known of this paper, or had I thought that I should discuss it, I should have looked up the record of a case that I attended six weeks ago. It was that of a young lady of about twenty-five years who, all her life, has had abdominal symptoms, but nothing relating particularly to the stomach. She has had spells of indigestion and vomiting, but she has never vomited blood, and has never had any pain in the stomach. She had her appendix removed by a prominent Philadelphia surgeon, two or three years ago, thinking that the attacks were caused by the appendix, but she has been worse since then. Not only has she had these abdominal pains, but she has had additional pain in the appendix, for which the surgeon made a secondary operation. When I was called to attend her, she had been sick for several days. She had eaten indiscreetly, and taken a long auto ride, and was seized with what her physician termed a gastro-enteritis; and it did look like it. She had some vomiting, and she had diarrhea and abdominal pain. There was no pain in the stomach; but pain located not in any particular place, but all through her lower abdomen. Within two or three days after I saw her, she had a bloody stool. Her abdomen was not tender in any place except over the site of the old appendix. That is, the lower abdomen was not ten-

der, but the upper abdomen was exquisitely sensitive a little to the right and above the umbilicus. The symptoms quieted down, and she wanted to get out of bed, but the pain still persisted, and could be located at the point of your finger. It cleared up within about a week. I believe that she has a duodenal ulcer, and that she had it all the time; and that it has been the cause of all the pains and other symptoms that she has complained of.

It is these atypical cases that give us trouble.

DR. R. B. WHITE, Scranton: There is one thing that I think the men who have been doing very much stomach work will admit, and that is the large percentage of failures that they meet with, no matter what type of operation they perform, or what technique they follow. It does seem as though the simple correction of a mechanical condition will not cure a perverted physiology or a perverted function; and I firmly believe that the final element of cure rests with the internist, rather than with the surgeon. It is strange that in the Middle West, where so much gastric surgery has been done, a purely medical treatment for chronic indurated ulcer, such as Sippy has outlined, should have such a following; and it is a fact that his following is very large, and some of his results most gratifying.

As to the diagnosis of these lesions, I can well remember, at my first visit to the Mayo Clinic, thirteen or fourteen years ago, what a tremendous importance they placed on laboratory diagnosis. Clinical history was put to one side, and everything was laboratory examination of gastric contents for the presence or absence of acidity and of blood. On successive visits, it was strange to notice how the pendulum was swinging to the other side, and how little stress was being laid on laboratory diagnosis, and how much on clinical history plus the X-ray. It is possible to differentiate between a good many of these lesions by means of a proper X-ray picture.

I was not aware of a point in the differential diagnosis that I believe Dr. Lane brought out until Dr. Roberts called my attention to it. That is the presence of pylorospasm due to the existence of lesions other than in the upper abdomen. It is strange how frequently diagnosticians and surgeons become confused and operate for gastric ulcer, when a large fibroid or a bad appendix is present. I remember that in one of my early cases in which I did that operation, the patient had every clinical and laboratory evidence of gastric ulcer; and the patient did not remain cured after the operation. Shortly afterwards, she was again operated on, and

we found that our artificial stoma had closed. It was reopened; and again she made a prompt, but temporary, improvement. Another surgeon operated and corrected a pelvic difficulty, and the young woman has remained absolutely well ever since. This proves that you can bring about a condition of simulated gastric ulcer, and it is only pylorospasm.

DR. W. G. DIETZ, Hazleton: I think that in a good many of these cases the early symptoms are very likely to be overlooked. Many of them go the rounds of the dispensaries and hospitals, and are treated for dyspepsia and indigestion, and 50 per cent. of them are dependent on gastric or duodenal ulcer. In fact, there are practically no real organic diseases of the stomach except cancer and gastric ulcer. Gastritis, you hear mentioned every day; but there is practically no such thing, except it be of a toxic nature, or caustic, due to a traumatic or chemical process. The ordinary indigestion that we see so much of, and many cases that have vomiting and obscure, ill-differentiated pains in the abdomen or stomach, are, in nine cases out of ten, due to causes outside of the stomach, whether to appendix or gall-bladder infection or some constriction; or very frequently, to movable kidney. Six or seven years ago, I was called to see a lady fifty-five years of age. She had come to see her sister and brother, and had brought with her five or six different kinds of drugs that she took for gastric ulcer. She vomited often, and claimed that she had vomited blood. She did not say that she had ever passed any blood by bowel. I examined her. I wanted to make sure whether there was any pelvic trouble. She objected to the examination; but I said, "It is no use for me to treat you unless I make an examination, as you have had treatment for years without effect." The result of the examination was negative. The uterus was in an involuted condition, and there was nothing wrong. I examined the abdomen, and found a kidney that could be moved from any part of the abdomen. The right kidney was practically lying in the left iliac fossa. The patient claimed that she had grown very thin, which she was at that time; but that was attributed to inability to take nourishment, to pain, and so forth and so on. I put the kidney in place; but, of course, it would not stay there. I ordered her a support for the kidney; and her gastric ulcer was cured, and is cured to this day.

There is one point that nothing has been said about, and that is occult hemorrhage, occult hemorrhage in the stools, for the discovery of which a chemical reagent is required.

When this occurs, it is always suspicious—far more so than a free hemorrhage from the bowel. Hemorrhage from the stomach, hematemesis, does not always depend on a gastric or duodenal lesion. We may get it in contraction or atrophy of the liver. We may also get it from varicose veins of the esophagus. I had a case that I was sure was one of ulcer of the stomach. The patient had frequent hemorrhages and a great deal of pain; and yet the pain proved eventually to be due to atrophy of the liver, and the hemorrhages were due to varicosities of the esophagus.

DR. GEORGE B. MORELAND, Pittsburgh: The remarks of Dr. Dietz remind us that gradually, but surely, the sheet-anchors of the medical profession are disappearing. That easy way we used to have of saying, "Oh, it's your stomach or your liver," is finally going away; and we have to come to making some definite diagnosis. As he said, the cause is usually outside of the stomach when people complain of their stomach distresses.

DR. G. J. BERLINGHOFF, Scranton: We are often getting cases of stomach disorder in our practice; and it has been my difficulty, as much as that of the President, to avoid making an improper diagnosis in these cases. They are looked on as acute indigestion, nervous indigestion, associated with more or less disturbance of the stomach, nausea, vomiting, etc. The diagnosis is often quite difficult, judging by my own experience and that of others. The subjective and objective symptoms outlined by the previous speakers are landmarks that we should not overlook; but they are often overlooked, and we often have to make a guess. I have been using the high-frequency current for ten or twelve years. At first, I thought that this was like all other forms of electricity, consisting in mental impressions, suggestions, and sometimes possibly to relieve and restore a nervous temperament; but I have found it very beneficial in these cases. Dr. Roberts spoke of ulcerations of the stomach as similar to other ulcerations, such as varicosities. I believe that these things require stimulation to renew activity in cells, and produce growth of tissue. It is impossible to get at varicose veins without stimulating with iodine, caustic, scrubbing brush and soap, to bring about a reaction, and using a substance to increase the cellular growth of that tissue. I have employed high frequency over the point of tenderness and pain, whether over the different portions of the stomach or duodenum, when I was practically sure of a gastric or duodenal disturbance as the result of the test meal. I have been using this, and carrying out a line of medication and

diet, and have been surprised how these patients are helped. They leave me and get better. Whether they are cured or not, I am unable to say; but they have been helped, and go away satisfied. I believe that some method of stimulation, whether it be chemical, by massage, or by means of the galvanic current, brings the blood to the point and cures it, medicinally or mechanically. If this fails, you must resort to surgery.

DR. ROBERTS, closing: I just want to say a few words in conclusion. I believe, as Dr. White does, that a good many cases have been operated on without much benefit. I also believe that there are a good many who have had a gastroenterostomy performed when it should not have been done. When the patients are in large cities, where the facilities for doing this operative work are good, surgeons, young and old, who have command of good technique, are always in danger of getting over-anxious and performing operations when they are not indicated; so I laid stress on the point that unless you can demonstrate stenosis of the pylorus or an ulcer, gastroenterostomy should not be performed. If you perform this operation, these cases will not be benefited. I also laid stress in the paper on the point that if you open the abdomen and find no ulcer, you should look well to the other abdominal organs—the appendix, the gall-bladder and the pelvis; and if you find a surgical lesion, correct it while the abdomen is open.

Dr. Peck was present, but said his paper was not in shape to present. He promised to demonstrate his method of doing a prostatectomy at the Hahnemann Hospital, Scranton, the following morning, instead of reading the paper.

BISMUTH IODOFORM PARAFFIN PASTE IN RECENT WOUNDS.—M. L. Emerson (*Journal A. M. A.*, January 12, 1918) records his experience with the use of this paste in more than 2,000 cases of recent wounds seen in civil practice with the occurrence of less than one per cent. of infections. The technic employed is essentially similar to that originally recommended by Morison. Hemorrhage is controlled by pressure on the fresh wound with dry gauze and the occasional twisting off of a small spurting vessel. The skin is then cleansed with a half per cent. solution of iodine in benzine. The wound is laid open, dirt is removed, and the ragged edges are trimmed. The paste is then applied freely to the entire surface of the wound and rubbed thoroughly into the tissues so that everywhere the drug is well imbedded in them. The surplus paste is then wiped away and the skin edges brought together and held until hemorrhage ceases. The use of buried catgut sutures should be avoided and the wound edges should be coapted by adhesive plaster strips if they gape widely. In the vast majority of cases treated in this way there is prompt healing by primary union, or a method which is but a slight modification of it.

THREE POLYCRESTS.

BY

DONALD MAC FARLAN, M.D., PHILADELPHIA.

At a recent meeting of the American Institute Dr. Bellows read a most interesting paper upon a study of atropin. It was one of the very finest, I think, read that year.

There can be no doubt that a more or less constant improving, voluntary and otherwise, is a sure way of getting a tremendously efficient materia medica, a desideratum of high needfulness when we realize that the doctrine of the similars is not only curative in cases capable of cure, but singularly palliative in cases not so amenable. Dr. Bellows' paper was one gotten by an involuntary proving of atropin as the result of an ocular instillation of the alkaloid atropin, occurring in the practice of Dr. D. W. Wells, of Boston.

The following observations were also involuntary in one sense—the patients did not know they were making provings, hence anything here recorded is in no sense *imagined*; it is a faithful portrayal of what they felt while under the dynamized action.

The three polycrests were china officinalis, dulcamara and natrum muriaticum. Under each twenty-two indications are given, as follows:

CHINA OFFICINALIS.

1. Dizziness when walking.
2. Loss of ambition.
3. Drowsiness.
4. Amaurosis.
5. Scalding lacrymation.
6. Offensive diarrhea.
7. Weight after eating.
8. Tasted eructations.
9. Belching which relieves.
10. Backache, dull and intermittent.
11. Sharp pains, left chest.
12. Pains are knifelike.
13. Sneezing.

14. Rhinorrhea, which is nocturnal and watery.
15. Cannot lie on left side.
16. Dyspnea, china with me affected the left lung in a very powerful fashion.
17. Nightmare.
18. Skin is sore all over to the touch, bad on the vertex.
19. Thirst and fever.
20. Morning perspiration.
21. Amelioration from warmth, *worse after eating*.
22. Improved strength quite appreciably in a weak female and showed its capability more than once in instituting an intermitting condition.

NOTE—In Dr. William Boericke's work reader may well note *aggravation after eating* as after that act there was in evidence gagging followed by eructations which could be tasted, a weight or oppression and a drowsiness as well. The amaurosis was singular, "as if looking into a sunset." The left lung was so markedly involved that it must be seriously taken often as a leftsided pneumonic remedy when other things fit in.

DULCAMARA.

1. Dyspnea on walking.
2. Dark urine.
3. Buzzing like a bee in the head.
4. Aggravation walking.
5. Asthenia.
6. Sleeplessness.
7. Better appetite.
8. Oliguria.
9. Saffron colored urine.
10. Costiveness primarily induced.
11. Constant racking cough.
12. Right sided dyspnea.
13. Incontinent urination by coughing.
14. Racking night cough.
15. Nocturia.
16. Palpitation.
17. Dry tongue.
18. Dizziness.

19. Dry and stiff tongue.
20. Dyspnea.
21. Limbs become more limber.
22. Nervousness.

NOTE—Singularity enough costiveness was developed in my provers. From a perusal of *materia medica* a primary diarrhea would be expected. From my observations this medicine in the dynamized state has great power against asthenia (four provers affected) and also has great power against dyspnea (four provers also).

NATRUM MURIATICUM.

1. Headache ameliorated on lying down.
2. Throbbing headache.
3. A left sided earache.
4. Sore mouth.
5. Sore upper lip.
6. Intermittent asthenia.
7. Cold and warm feelings. Keeps up a whole day running.
8. Diarrhea.
9. Frequent urination.
10. Burning urination.
11. Urination in drops.
12. Watery diarrhea.
13. Morning thirst.
14. Loss in weight.
15. Nocturia.
16. Nocturnal dyspnea.
17. Nausea.
18. Fluttering heart.
19. Frequent call to stool.
20. Erythematous and papular rash.
21. Slight body itching.
22. Loss of strength.

From this it can be easily seen why the early Hahnemannians were so successful with malaria. In a recent conversation with Dr. R. F. Rabe he mentioned a fine result with blood tallying. It's a desirable method of full corroboration.

EDITORIAL

THE RECOGNITION OF FOCAL INFECTION.

It is generally conceded that focal infections play a very important part in the production of many states of chronic ill health and especially in many obscure and persistent forms of arthritis. The particular phase of this problem that often puzzles the physician is to find the location of the infecting organisms.

Local infections may occur in any part of the body. There are, however, certain structures that are so frequently the seat of infection, that we are justified in looking upon them with extreme suspicion in every case of this type. Among these structures may be mentioned (1) the teeth, (2) the tonsils, (3) the nasal sinuses, (4) the prostate gland, (5) the vermiform appendix, (6) the fallopian tubes and ovaries.

The discovery of latent infection about the teeth is by no means a simple matter, and the cursory examination made by the average dentist more frequently than otherwise fails to reveal the source of infection. The discovery of these foci requires the work of a dental expert assisted by a competent roentgenologist. This fact was recently impressed upon the writer by an incident which do doubt has occurred in the practice of many physicians. A young woman who had suffered for several years with a mild form of poly-arthritis was directed to consult her dentist in regard to the condition of her teeth. He pronounced them to be perfectly sound in every respect, and a superficial examination of the mouth seemed to corroborate this view. After a variety of therapeutic procedures had failed to give the patient any relief, she consulted an oral specialist who removed the fillings and bored into the roots of six or seven teeth with negative results. He then suggested that radiograms be taken of certain suspicious teeth but no pathological lesions could be demonstrated. As a final resort several roentgenograms were made of the remaining teeth and two distinct abscesses were discovered about the right upper molars. There were no subjective symptoms indicative of any disease of these teeth nor did the most careful

external examination lead to any suspicion of their being diseased. In this connection, however, it is necessary to express a word of warning. The writer has had the opportunity of observing a number of cases of poly-arthritis that have had one or more teeth extracted which proved to be perfectly normal and the extraction of the teeth was followed by no improvement whatever in the pathological condition. We are then justified in exhausting every method of examination before concluding the teeth are free from infection, but we ought to be loath to direct the extraction of any teeth unless such suspicions are confirmed by roentgenography or other indisputable evidence.

The tonsils, especially in young persons, are frequently the seat of local infections that are extremely difficult to detect. Some tonsils are obviously diseased and should be removed if a persistent poly-arthritis co-exists. In other instances, the tonsils may be perfectly normal on the surface and yet a tonsillectomy may show a distinct infection deep in or behind the tonsillar tissue and the diagnosis in these cases also is frequently impossible until the tonsil is removed.

Infections in the nasal sinuses are quite common and here, again, we frequently require the assistance of the roentgenologist and of the rhinologist to make us sure of the diagnosis. The nostril history of an acute attack of sinusitis, or any persistent nasal discharge from one would, of course, be of considerable help to us in recognizing the origin of such infection.

In the male, the prostate gland is very commonly a source of chronic disorders particularly those forms of arthritis with one or more joints involved. Usually but not necessarily, there is a previous history of gonorrhoea in these cases, and careful examination of the prostate gland and of the discharges from it should be made in all suspicious cases, as therapeutic measures directed at the affected joints alone will usually prove utterly useless until the prostatic condition is recognized and dealt with effectively. The same remarks apply with equal force to the inflammation of the tubes and ovaries in the female, with the exception that a cure in these cases can usually only be brought about by an abdominal section and the removal of the infected tissue.

The appendix is very frequently overlooked as a source of focal infection in arthritis, but nevertheless it is not an uncommon one. Any practitioner of large experience has no doubt been surprised at the disappearance of joint pains and stiffness in patients who have been subjected to an appendectomy. A striking case of this character came under our observation a number of years ago and we believe that closer record of the cases would reveal many instances of the same character.

From what has been said it is obvious that it may be easy to suspect local focal infection in certain chronic joint conditions, but the finding of this focus is a problem that may well tax the ingenuity of the most expert and at times exhaust the patience of both the physician and the sufferer. No therapeutic benefit, however, is likely to follow until the infective area is discovered and rooted out. It is imperative that the physician should not be satisfied with attaining anything less than this end and it is well to impress upon the patient the paramount importance of persisting in the search as results will well justify all of the trouble and the expenditure of money that it sometimes requires.

G. H. W.

FIVE THOUSAND MORE MEDICAL OFFICERS NEEDED.

THE Surgeon General of the United States Army has issued a call for five thousand more physicians in the Medical Reserve Corps. At the present time there are approximately eighteen thousand members in the Medical Reserve Corps and about fifteen hundred other physicians have been offered commissions who have not as yet accepted them. There are sufficient physicians at present in the army to take care of immediate needs; but the rapid increase that is to be made in the army during the next few months will necessitate a proportionate increase in the number of medical officers. It is also estimated that at least twenty-five hundred physicians per year will be needed during the continuance of the war for the purpose of replacing the vacancies in the medical personnel.

In recruiting officers for the Medical Reserve Corps, the Surgeon General is desirous that the interests of civil communities be conserved as far as possible and a plan is being worked

out whereby it is thought to be practical to secure men from those portions of the country from which they can be best spared. There has been from time to time a suggestion made that a special law be passed authorizing the conscription of medical men up to fifty years of age, but there is every reason to believe that such an act will be unnecessary and that the medical profession is perfectly capable of supplying all the men needed by the volunteer system.

We are glad to state that Pennsylvania has already sent a very large percentage of medical men into military service and the members of the homœopathic profession in Pennsylvania have shown their self-sacrificing spirit in responding liberally to the call of their country.

The time has now arrived when every physician must again seriously consider his duty in the matter and be prepared in the near future, where circumstances permit, to undertake his part in carrying out the great military effort to which the nation has committed itself.

G. H. W.

HEALTH INSURANCE.—The North American continent has a very much larger proportion of physicians than any European country. It does not as yet boast of any perceptibly higher standard of health. Shall we assume that these standards are not affected by available medical facilities? Isn't this an admission that the medical profession is a useless burden? Or is the explanation to be found in the fact that for lack of proper organization the American people never utilized their medical facilities to their full capacity? Patients without medical aid on one hand—doctors who have nothing to do, on the other. When health insurance brings these two together, we may find that one doctor for every 700 population is not too much, and that every 700 population can afford through collective effort to support a warden of their health, as it will support more than one teacher, minister or lawyer.

Health insurance is not a panacea. Nor is it a secret remedy. It does not promise to accomplish anything that could not conceivably be accomplished in other ways. But it is a simple, practical, common sense, widely tried out, method of marshalling the financial and medical resources of a civilized community in the fight against the vicious circle of circumstances, under which disease breeds poverty and poverty breeds disease. Surely the medical profession cannot afford to be registered in an attitude of opposition to this social reform.—J. M. Rubinow, in *The Public Health Journal*.

GLEANINGS

THE BLOOD IN SHOCK AND HEMORRHAGE.—W. B. Cannon, John Fraser, and A. N. Hooper (*Jour. A. M. A.*, February 23, 1918) investigated the distribution and character of the blood in traumatic shock among soldiers and found that the red cell count of blood taken from the various capillaries was higher than that from the blood from a vein, and that the discrepancy was the greater the more profound the shock, amounting to as much as two million corpuscles. In such cases the venous count was approximately normal and the high capillary count indicated a stagnation of the corpuscles in the capillaries due to a retardation of the circulation through them. This condition was only slowly recovered from when once established. In hemorrhage and after shock complicated by hemorrhage the hemoglobin was low as compared with the red cell count, and the same was true after operations complicated with hemorrhage. Transfusion of whole blood raised the red count and hemoglobin, while infusions of hypertonic salines or gum solutions reduced both red count and hemoglobin. Small amounts of hypertonic saline did not have this effect, due to the reduction of the capillary stasis and the absence of material dilution. If the concentration of capillary blood continued for several days after injury it indicated a continuation of an unfavorable condition; its disappearance indicated improvement.

WAR DEAFNESS.—Stacy R. Guild (*Journal of Laboratory and Clinical Medicine*, January, 1918) conducted a number of experiments to test the relative efficiency of various devices for preventing injuries to the ear parts by detonation. The observations on the middle ear are reported in the present paper; the cochlear parts will be the subject of a later report. Guineapigs were used for the work with specially prepared rubber "ears" for holding the device to be tested. The source of the detonation wave was the firing of a forty-five calibre Colt automatic pistol. It was found that the Scientific Ear Drum Protector "Tommy" and the Mallock-Armstrong Ear Defender were the most efficient of the eight devices tried. For any but military use, the latter is to be preferred, but for army use, there are certain objections to it, namely, that a projectile passing alongside the head, wounding only the pinna, or the outer part of the external meatus, in itself a relatively slight injury, and quite a common one, would shatter any hard obturator present and form secondary projectiles of the fragments, thus complicating the wound. The "Tommy" has another advantage over the Mallock-Armstrong device in that it is the simplest possible thing to keep clean. Next in merit comes the wax cone of the Italian navy type, which is closely followed by cotton soaked in vaselin. Because of the availability of the last measure, it is worthy of note, and the extra protection obtained by mixing the cotton with vaselin is well worth the trouble, as a comparison of this record with dry cotton will show. Cotton soaked with glycerin was less satisfactory. Dry cotton, the Elliot Perfect Ear Pro-

tector, and the Wilson-Micheison device ranked together as giving the least protection to the middle ear of animals used. Testing devices for the relative amount of reducing ordinary sounds was tried, but results were contradictory. Of mechanical devices, the Elliott reduces ordinary sounds the least, and the "Tommy" the most, the latter cutting them down more than dry cotton does.

THE HEART IN EXOPHTHALMIC GOITRE.—Dr. H. A. Hare: Goitre in the sense of simple enlargement of the thyroid gland is almost symptomless, except from pressure symptoms when the growth is exceedingly large. It is of the utmost importance to separate true goitre from the exophthalmic form, and we should practically make a third classification of thyroid disease which might be called the hypothyroid class, because in these instances the gland, although it becomes greatly enlarged, does so, without the development of symptoms indicating parenchymatous change. That is, we meet with considerable enlargement of the thyroid gland in which there is probably some degeneration of its secreting substance and we have hypothyroidism, although hyperthyroidism, in the sense of the enlargement of the gland, is present. In other words, we have one type of great enlargement of the thyroid gland which is symptomless, except from pressure. We have enlargement so small that it is easily overlooked and yet in which there is so much secretion as to produce symptoms of hyperthyroidism. We have also enlargements of the thyroid gland associated with lack of secretion, hypothyroidism, which class very frequently is overlooked.

In regard to the hyperthyroidism or cases in which there is excessive secretion, so far as the heart is concerned I am surprised to find that, in a considerable proportion, in addition to the tachycardia, we do not have relaxation of the vascular system. An exceedingly rapid pulse is often found with a very high tension, that is, a pressure of from 160 to 180. I was asked to discuss the action of the heart in exophthalmic goitre, but felt that I ought to decline, because I knew so little about it.

To the three types of hyperthyroidism should be added a fourth in which there is enlargement of the gland with excessive secretion, but in which the interlocking directorate of the other parts of the body compensates. This is seen in pregnancy.

In treatment, the rest cure is invariably applicable in the presence of much tachycardia. There is little use in trying to treat an exophthalmic goitre patient who lacks the means of a real rest cure. Therefore, I believe that this type of case should be sent to the surgeon earlier than the patient who can afford one. Concerning the action of drugs, I have had little results from digitalis. So far as the pulse is concerned, my best results have been obtained from veratrum viride in 8 to 10 minim doses of the tincture five to six times a day. I am not, however, able to give a scientific explanation for the results secured.—*New York Med. Journal*.

THE USE OF DICHLORAMINE-T IN THE TREATMENT OF INFECTIONS AND INFECTED WOUNDS.—Walter E. Lee and P. Funiess (*Annals of Surgery*, January, 1918) say that particular attention must be paid to the following points in handling Dichloramine-T and its solutions: All bottles should be of dark amber, glass stoppered. They should be thor-

oughly cleaned and dried before any of the materials are put in. If alcohol is used for drying the bottles, it should be allowed to completely evaporate before the bottles are used; no solutions should be returned to the stock bottles from the ward bottles or atomizers at any time; bottles in which the solution has already undergone decomposition should be carefully cleaned with hot water and dried thoroughly. If, in using the 20 per cent. solution, medicine droppers or glass rods are used to transfer the oil to the wound surfaces the droppers should be dry if put into the oil bottles. The common practice in some places has been to boil these utensils to sterilize and then use them while still wet. This results in the gradual accumulation of water in the stock bottles and a very rapid decomposition of the Dichloramine-T. The glass rods or pipettes or syringes if left in contact with the oil for five or ten minutes are entirely sterilized and do not need boiling. The method Lee and Funiess have followed is to pour the required amount for the wound into a clean dry medicine glass and to take the oil with the pipette from the second container. They have repeatedly kept the 20 per cent. solution on the laboratory desk in brown bottles for three to four weeks before it decomposed.

POSTOPERATIVE PNEUMONITIS.—Allen O. Whipple (*Surgery, Gynecology, and Obstetrics*, January, 1918) concludes with regard to postoperative pneumonitis as follows: It is a far more frequent complication than reported. Its incidence in surgical services varies largely with the care given to its detection. The most important predisposing factors are: Recent or concurrent inflammation of some part of the upper respiratory tract; pulmonary congestion; inhibition of normal respiratory movements or excursion as a result of abdominal incision; debilitated states such as sepsis and cachexia; increase of the numbers and virulence of the pneumococcus during the winter and early spring. The most common inciting factor is the pneumococcus. Of the groups, the pneumococcus IV is the most frequently found in the patient's sputum. The pneumonitis, caused by pneumococcus IV is, as a rule, an atypical pneumonia, of short duration, resolving by lysis, and has a lower mortality than the groups I, II, and III pneumonitis or the pyogenic or septic pneumonias.

SOLUTION OF SOAP AND WATER IN GUNSHOT WOUNDS.—J. B. Haycraft (*British Medical Journal*, January 19, 1918) reports strikingly good results from the use of a soap solution, combined with primary suture in gunshot wounds. There were only seven complete failures in a series of ninety-eight cases, and only two failures among thirty-eight cases of compound fracture. The solution used was made by dissolving one part of shaved pure hard soap in twenty of boiled water. When applied this was diluted with an equal volume of sterile water. Where possible the entire wound surface was excised, the soap solution applied and rubbed in thoroughly, and the wound closed by immediate suture. In deep wounds or perforating ones complete excision was not always possible, but the soap solution was applied as described after the wound had been well cleaned up, a split rubber drain inserted, and the wound

closed. This was also the technic in cases with compound fracture. If necessary, tension incisions were made near the wounds to permit closure. In many cases healing was prompt, with little or no local reaction, but in others there was some local redness, swelling and edema after two or three days, but so long as there was no rise in the patient's pulse rate this was found to subside promptly. In all cases the wounded part was completely immobilized for a week to ten days. The method was found suitable for fresh cases only.

INDICATIONS FOR OPERATIVE INTERFERENCE IN PRE-ECLAMPTIC TOXEMIA.—W. G. Dice (*American Journal of Obstetrics*, January, 1918) states that in the majority of cases where the average blood pressure has been 120 to 130 millimetres Hg, dangerous toxemia is indicated if the pressure rises to 150. In Irving's statistics, among cases with a blood pressure of 150 to 160, in one out of three toxemia developed, while with a pressure exceeding 180, all became toxic. High pressure alone is a more frequent early sign of toxemia than albuminuria alone, and the pressure is not proportional to the amount of albumin. When a patient's blood pressure has gradually risen from 150 to 170, in spite of proper diet, rest and eliminative treatment, and one or more other toxic symptoms co-exist, the time for expectancy is ended, whether the amount of albumin is large or not. A fluctuating, high blood pressure in toxemia is also of serious import, indicating marked derangement of the cardiovascular mechanism. Dice believes few men doing obstetrical work fully appreciate the importance of the eye symptoms, either from the standpoint of the patient's future vision or as an index of the degree of toxemia. The first objective sign is a haziness of the fine detail of the fundus, the edema of a beginning retinitis, and the uterus should be emptied before the initial stage is past. Rest, diet and active elimination may possibly cause improvement of the eye, but when once the latter is involved, only careful daily observation of the case in a hospital can justify delay, and then only when all other symptoms improve and the eye condition does not extend. While no single symptom warrants interruption of pregnancy, two or more, properly interpreted, will usually enable one to act wisely. Some have emphasized epigastric pain in the later months of pregnancy, especially with high blood pressure, as an ominous sign. Persistent frontal headache, not relieved by cathartics, is also a danger signal.

OPERATIVE RISK IN CARDIAC DISEASE.—John M. Blackford, Fred A. Willius, and S. B. Haines (*Journal A. M. A.*, December 15, 1917) direct attention to the fact that general impressions alone are to be found in the literature regarding the relation of cardiac disease to surgical operations. They have, therefore, investigated the problem in an extensive series of cases and have reached the following conclusions: Valvular disease with good or fair compensation does not materially increase the operative risks and is not a contraindication to operation, or the proper use of ether anesthesia. The cardiac risk is best estimated in surgical cases by a careful interpretation of the patient's ability to stand stress. In

ambulatory cases with no marked loss of compensation operation is generally safe. Where decomposition is marked it should be remedied by medical treatment prior to operation. There should be no surgical intervention in a cardiopath, however, unless it is apparent that it is essential to reasonable health or will benefit the cardiac condition. Marked or complete relief of very severe cardiac disease often results from the surgical removal of infective, mechanical, or toxic sources of strain or degeneration, specially is this the case in toxic goitre. Auricular fibrillation increases the operative risk by only 3 per cent. There seems to be no increased risk and there is often very marked improvement from operation in certain cases of auricular flutter, partial or complete heart block. Myocardial insufficiency may reach a point at which improvement from treatment is no longer possible. The only way to determine this stage is by the therapeutic test, and until it is reached surgical treatment should not be denied the patient as it frequently improves the cardiac condition greatly. The development of definite to marked cardiac improvement in selected cardiac cases occurred in 80 per cent. of the cases studied following surgical treatment, and this, alone, justifies the small increased operative risk under such circumstances.

ARTIFICIAL PNEUMOTHORAX IN ADVANCED CASES OF PULMONARY TUBERCULOSIS.—Henry L. Shively (*American Medicine*, November, 1917) defines the cases most suitable for collapse therapy as those which have been thoroughly tried out and have failed to respond to other methods of treatment; those in which there is active and progressive disease or a cavity in the top of one lung with the other lung relatively sound; febrile cases in which the patient is losing weight. After a few injections the temperature may drop to normal, the cough and expectoration be reduced by one half, and the morale of the patient be completely changed. The site to be chosen for the introduction of the needle is to be determined by a careful physical examination of the patient's chest, by percussion and the stethoscope; also the fluoroscope and the x rays. The Floyd Robinson apparatus is employed with 0.5 per cent. novocaine anesthesia. In some cases 1 per cent. to 2 per cent. cocaine is used. A small incision is made in the skin before introducing the needle. Dyspnea, rapid heart action, or pain should cause the cessation of the flow of gas. Sterile nitrogen gas is usually preferred because it is less rapidly absorbed than the others. The author has employed this treatment in fifty cases, all of them in a far advanced stage of the disease. In twelve very good permanent results were obtained. In twelve other cases the results have been satisfactory though not so marked as in the first group. In six cases the disease has been progressive and little permanent effect from the treatment has been observed. Eight patients have died, two after a single injection. The twelve remaining cases are equally divided between those in which repeated efforts were unsuccessful in effecting an entrance into the pleural cavity and the patients who discontinued the treatment after one or two injections and before any significant effect could be expected.

CAUSATION AND CURABILITY OF CERTAIN ALBUMINURIAS.—David Riesman (*Journal A. M. A.*, December 15, 1917) calls attention to a form of chronic nephritis with albuminuria which is often insidious and found in the course of routine examinations. The same affection has also been classed among the cyclic or orthostatic albuminurias of adolescents. The features are those of a non-progressive nephritis with small amounts of albumin, occasional granular and hyaline casts, and a normal phenolsulphonephthalein excretion. Such cases usually show no obvious cause of the nephritis and albuminuria, but on careful examination there will be found to be some chronic focus of infection, such as the tonsils, kidney stone, etc., removal of which leads in a few months to complete recovery of normal kidney function with freedom from albumin and casts in the urine. Several illustrative cases are given, in one of which the infection was bronchial and the staphylococcus was isolated from the sputum. The administration of a vaccine cured both the infection and the nephritis. Dental abscesses are also very frequent foci of infection which lead to these forms of nephritis. While recovery follows the removal of all foci of chronic infection, its progress may cover several months, during which the irritation of the kidneys is being repaired.

THE X RAYS IN PHTHISIS.—George W. Holmes (*Boston Medical and Surgical Journal*, January 17, 1918) says that an opinion based upon Roentgen evidence alone is of about the same value as an opinion based upon the physical findings alone. Without a careful history both lose much of their worth; combined with other evidence the X Ray may be of great value, as without doubt it is capable of revealing changes in the lungs which cannot be demonstrated by any other method. The examination of the chest divides itself into two principal methods, fluoroscopy and radiography. The study with the fluoroscope has the advantages of being cheaper, and of being more easily and quickly done. The image seen is that of the living, moving organs, and it gives data which could not be obtained from the photographic plate, such as the movements of the diaphragm, the lighting up of the lung fields during respiration, the pulsation of the different chambers of the heart, and possible changes in the shape of dull areas in the lungs during change of position of the patient. Its disadvantages are the inability to study carefully the detailed structure of the lungs and the fact that it does not give a permanent record. Those interested in the case must rely on the personal judgment of the radiologist, whereas with the plate a joint study is possible. The radiographic method has the advantage of giving an accurate, permanent record of the condition within the chest, and should show any variation from the normal which gives rise to change in density. Sufficient data may be obtained from a single plate or several may be needed, and in a large number of cases stereoscopic plates should be taken. The ideal method seems to be a fluoroscopic examination, when definite records are made of the excursion of the diaphragm, changes in the shape of abnormal shadows, and illumination of the lung fields during respiration and coughing. Then, if the diagnosis is in doubt or negative, stereoscopic plates are made with the patient sitting and the tube behind. Should the

fluoroscopic findings be fairly definite, a single plate taken in the position which best shows the pathological process will be sufficient.

PREDISPOSING FACTORS OF WAR PSYCHONEUROSES.—Julian M. Wolfsohn (*Lancet*, February 2, 1918) sought to determine the true importance of previous nervous unsoundness as a predisposing factor in the development of the various war psychoneuroses by subjecting a group of 100 unselected cases of such psychoneuroses to critical study of their past personal and family histories. As a control a group of 100 surgical cases in soldiers who did not develop psychoneuroses was similarly analyzed. The comparative results showed strikingly the very great importance of previous personal instability in the family history. Thus in the psychoneurotic group (Group A) 64 per cent. gave a strong family history of nervousness, as compared with only 15 per cent. with such history in the non-neurotic group (Group B). Group A also gave a family history of alcoholism in 50 per cent., of irritability of temper in 36 per cent., of insanity in 34 per cent., of epilepsy in 30 per cent., of stigmata of degeneration in 10 per cent., and of one or more of the above in 74 per cent.; as contrasted with 24 per cent. of alcoholism, 12 per cent. of irritable temper, no insanity or epilepsy, no stigmata, and one or more of these factors in only 38 per cent. among the men of Group B. The comparative results were even more striking in the case of personal histories of the two groups of men. Finally, the element of acquired neurotic instability, as the result of strain and the conditions of life, was found to play a relatively small part in the production of war psychoneurosis.

TABES DORSALIS.—Morris Grossman (*Journal of Nervous and Mental Disease*, February, 1918) has made a statistical study of 240 cases of tabes with regard to the incidence of syphilis, the age of infection, the age of onset, the influence of treatment of the primary infection, the pre-tabetic stage, preataxic stage, ataxic stage, chair and bedridden stage, and death in this disease. He finds the average age of syphilitic infection to be 24.4 years, the average age of onset of tabes in 238 cases to be thirty-nine years. No detectable difference exists in the age of onset of tabes in those patients treated with antisyphilitic remedies, and in those not treated, or presumably less treated. The average pre-tabetic interval is not greater than 14.6 years. The pre-tabetic interval in the young may, but seldom does, last for a shorter period than in the more mature. The resistance of the central nervous system seems to deteriorate with age. The duration of the preataxic period may be influenced by age; its probable average length is three years, and seems to be shorter in women than in men. The average life expectancy of the bedridden tabetic is very much longer than is usually taught, being fifty-three years. Most tabetics usually perpetuate the ataxic stage; in the small percentage of cases which become bedridden, owing to uncomplicated ataxia, the average duration of the ataxic period is 4.11 years. Among tabetics who become bedridden a short ataxic period usually follows a short preataxic period; the short ataxic period in these cases is due to the same mental inferiority as is conducive to the short preataxic stage. The cause of death in tabes

is syphilis. Syphilis and tabes lead to death through cardiovascular and renal degeneration, and through weakened resistance to nonsyphilitic infections. The average age at which death occurs is fifty-three years, the mortality among tabetics over fifty-three years of age being 238 per 1,000. Tabes is as nonlethal as any form of syphilis.

A CONSIDERATION OF THE PRESENT OUTLOOK ON TUBERCULIN THERAPY.—Paul H. Ringer (*Southern Medical Journal*, February, 1918) sets forth the following as fundamental facts in connection with the administration of tuberculin: 1. Tuberculin must never be looked upon as other than an aid in the treatment of tuberculosis; must never be accorded first place, and must never be allowed to supplant, but only to supplement a strict dietetic-hygienic regime. 2. Tuberculin must not be used by the inexperienced, as in their hands much harm will result. 3. Tuberculin must be used in a restricted number of cases, and a good reason for using it must be present, a reason other and better than the mere fact that the patient has tuberculosis. 4. The dose of tuberculin must not be regulated by rule of thumb, but must be highly individualized. 5. While opinions differ on this point, the writer believes that in the long run the optimum and not the maximum dose should be sought, as it is a well known fact that a large amount of tuberculin tolerance is not synonymous with the establishment of a high grade of immunity to tuberculosis. 6. Users of tuberculin must be on terms of intimacy with the physical signs presented by their tuberculin patients, and they must be familiar with the early signs of activity in the lung, whether of recent or recurrent origin. 7. Users of tuberculin must auscultate their tuberculin patients before, practically, every dose, as only by so doing will mild focal reactions be recognized and dose governed accordingly. 8. Users of tuberculin must have before them a definite conception of what tuberculin can do, of its mode of operation, and of what is desired in each particular case. 9. The question of reactions must unfortunately vary with the viewpoint of the administrator or tuberculin. Opinions on this important point will continue to differ. No one will willingly produce violent systemic reactions, but the milder reactionary phenomena are desired by some and tabooed by others. Tuberculin is not a product to be used therapeutically by the general practitioner who has but two or three cases at a time to whom to administer it.

MENTAL ABNORMALITY AND CRIMINALITY.—The more intensive study of mental deficiency and personal maladjustment made necessary as a part of our preparation for war has advanced psychiatry to a position of extreme importance and dignity in the profession of medicine. Not long ago the medical man outside of an asylum who gave thought and voice to questions of mental deviation from the normal was looked upon even by his professional brethren as a mere theorizer, who was perhaps a trifle cracked-brained himself. But the establishment in most of the military cantonments of clinics in which all enlisted men are being tested by psychological methods is adequate evidence of the Government's approval of the importance and the necessity of the work. Estimates of the quality and quantity of mental efficiency or inefficiency are being made by trained

psychologists and psychiatrists, and these estimates are being utilized in the search for officers, commissioned and non-commissioned, suitable for different posts, of duty. War should call to service in line of battle only those who are mentally and emotionally adjustable in high degree, but back of the firing line important and necessary work can be found for those who are mentally less adequate. The responsibility of making estimates of the degree of mental and emotional fitness of the individual human units rests upon the psychiatrist. These psychometric estimates seem of more importance, indeed, than physical examinations, for the war is one of wits rather than of might. It is not strange therefore, that the Government is unwilling to assume the risk of subjecting a citizen to the danger of defeat, disgrace, or death, until it has acquainted itself with the man's mental capacity to act in conformity with the standard of his associates.

Yet, in contrast, what do we see in civil life? Is not every prisoner supposed by judge and jury to be physically and mentally and emotionally sound? Is consideration ever given to the possibility that crime may be one of the manifestations of mental abnormality? Do not prison records tend to prove that most of the repeaters are mentally defective and in mental age only children? Is a prison the proper place for a mental child? Are the chain-gang and the electric chair to be a part of our kindergarten system? Is it not time for us to find out more about these so-called criminals? May not their anti-social tendencies and outbreaks be looked upon as signposts pointing the way back to the disordered and undeveloped and untrained mind, out of which spring all wrong and wretchedness and depravity? Why may not every criminal court have in its service a physical and a mental diagnostician—an internist and a psychiatrist? Why should the state not maintain a medical board of appeal—composed of an internist, a pathologist and a psychiatrist—analogous to the Army Medical Advisory Board, to which a prisoner might appeal for examination? Nonhuman by-products are being conserved; why not the human?—*Virginia Medical Monthly*.

ORDERS ISSUED PRESCRIBING WHAT SURGEONS MUST CERTIFY.—Following the recent case at Camp Shelby, Miss., of an enlisted man who refused to undergo a surgical operation and was sentenced to imprisonment for two months, and in which the War Department set aside the sentence because the surgeon did not certify that the operation would be without risk of life of the soldier and was necessary for removal of a disability that prevented full performance of military duties, orders have been issued prescribing what the surgeon has to certify in such cases. Hereafter, before charges are preferred against any soldier for refusal to submit to medical treatment or a surgical operation, there will be obtained by the officer preferring the charges a formal, signed certificate of the surgeon who has attended the soldier, stating the nature of the disability from which the soldier is suffering, whether such disability prevents the full performance of any and all military duties that properly can be required of him, stating the nature of the treatment or operation that is necessary to remove the disability, and stating whether the treatment or surgical operation, as the case may be, is without appreciable risk to his life.—*New York Medical Journal*.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

BRITISH NOTES.—(1) Tinctures and low potencies can be conceived of as acting chemically—the phenomena of ionisation making very credible the power of dilute solutions; but if for high potencies we have to conceive a physical rather than a chemical energy, two considerations force themselves upon us: First, that the physical force clearly has the same tissue attractions as the chemical, as similar symptoms serve as indications for both high and low potencies. Second, that there may, in the pharmacy of every drug, be a point where the chemical action becomes feeble, and the physical has not become fully developed. Such a potency would be nearly inert and the use of it followed by failure. Clearly the inert point of dilution will not be the same for all drugs, as the body is much more susceptible to some than to others; the 3x of arsenicum or phosphorus is much more powerful than the 3x say of pulsatilla; but for every drug there may be an inert potency and we do well to remember the possibility. The practical rule would be in prescribing low to keep really low, say up to 2x for most drugs, 3x for some, and then for most remedies to jump to 6 or 12, avoiding the third and fourth centesimals.

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(2) We are still far, very far, from knowing what the essential difference is between the sleeping and the waking states. Brunten used to say, I remember, that during sleep the organism was manufacturing the substances for waking life and during waking life preparing for sleep. This is little more than putting our ignorance into plausible words, yet, possibly, the difference between sleep and waking is a difference in the content of the body fluids, the presence or absence of substances normally manufactured rhythmically, periodically reaching a climax and then being destroyed or eliminated. If there is any truth in this, then a pathological state that called for lachesis would be one wherein the diseased tissues were particularly susceptible to the changes of body fluids that occur in sleep, so that sleep as a normal mechanism was an irritant to the tissues rendered abnormal by disease. I hasten to add that I am not giving any final explanation of the characteristic lachesis symptom but only explaining a road along which possibly the explanation will ultimately be found.

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(3) Patients indicating phosphorus have often an abnormal craving for salt. Instead of dismissing this as fanciful we ought to look on it as a possible clue to a point in physiological chemistry that could not fail to be of interest could we define it. What is the reason of this call for chlorine? We know that there is great elimination of chlorine in some conditions. Can we find curative relation between these and phosphorus? It would seem worth while to investigate. Our bodies are constructed to work without undue friction throughout a considerable range of temperature, of presence of greater or less quantities of moisture, of varying electrical conditions of atmosphere and so forth.

Normally these adjustments to varying conditions are made without attracting attention, but there must be some physiological mechanism for doing the work. Once we grasp this fact consciously, what more natural amid the infinite diversities of life than that in some the mechanisms should creak a little when set to one task or other?

Why should not A find it difficult to face cold and B to face heat? We know, of course, that these differences occur, but are too content to note them and then ignore them. But did we know fully the essential mechanisms that regulate body responses to temperature or moisture, or thunder, we might then at once perceive that the effects of a disturbance in one of them must be felt otherwise than in a mere slowness of response to an outside stimulus. At any rate, if a tissue were affected by disease, then it might be particularly liable to give extra trouble if one or other of these simpler mechanisms were in the least faulty. Therefore the reaction of drugs to heat and cold and so forth might be seen to be of vital importance, because of giving means of influencing these fundamental processes. Especially we need to remember how man's ingenuity has enabled him artificially to correct certain of the difficulties which nature opposes to him. He can make heat or cold for himself, and, therefore, degrees of sensibility, and consequently of sensitiveness of body mechanism, have, no doubt, developed in man that are out of the question for animals.

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THE REPERTORY.—To accomplish the best which homeopathy offers, to bring about cures which can be wrought in no other way, repertory analysis is often absolutely essential. Its use makes of the physician a better prescriber, a more ready prescriber and gives him a greater knowledge of and confidence in the *materia medica*. Furthermore, it is the foe of routinism and of careless or slovenly methods of practice. Its technique is just as important to the prescriber as is surgical technique to the operator, and must be just as thoroughly understood.

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BONESET.—*Eupatorium perfoliatum*, or boneset, is an excellent remedy for fever and ague. This remedy was used as a specific remedy for a peculiar epidemic which raged in this country half a century ago, more particularly in the State of Pennsylvania, and which, from the

pain in the bones that was constantly present in this disease, was termed *break-bone fever*. Copious perspiration was a frequent attendant of the fever, in spite of which boneset, which excites perspiration, was given. We find it stated in the first volume of the Transactions of the American Institute of Homœopathy, that "This herb is one of the remedies, and perhaps the principal one employed by the aborigines of this country, in the treatment of intermittent fevers, and hence another of the common names by which it is known among us, agueweed, which corresponds to the Indian name."

"In miasmatic districts, along rivers, at fisheries, on marshes and their several neighborhoods, where intermittent and remittent fevers have prevailed epidemically, the eupatorium has been a favorite remedy with the most successful practitioners, as well as a deservedly popular one in the hands of the people, very often superseding the necessity of calling in medical aid, especially where such aid could not be readily obtained."

A few drops of the tincture of eupatorium may be mixed in a small tumblerful of water, and the patient may take a tablespoonful of this mixture every few hours. A favorite mode of prescribing eupatorium is in the shape of a tea, of which a small cupful may be drank two or three times a day.

(The above was published in a volume which bears date of 1858. The joint author who wrote it was Dr. Charles J. Hempel, professor of materia medica and therapeutics in the old Homœopathic Medical College of Pennsylvania.)

A LETTER FROM HENRY CLAY TO DR. HERING.—The following was found by a son (Carl) of the doctor's, and is dated December 14, 1849: "Your liberal kindness toward me would not allow you to indulge me in the gratification of testifying my gratitude to you for the successful exercise of your professional skill on me, on two distinct occasions, by the customary compensation; but you cannot prevent the expression of my great obligation to you for the benefit I derived from your obliging prescriptions. I thank you for them most cordially. With great regard, I am your friend and obedient servant, H. CLAY."

THE AFTERMATH OF WAR.—As always, war is still leaving more disease in its wake among the combatants than injuries. Out of every 1,000 men put out of action among the forces of the British Empire, 453 are rendered unfit by injuries and 547 by disease. The 453 injuries analyze as follows: 32 loss of sight; 49 loss of an arm or leg; 264 serious injuries to the extremities; 50 head injuries; 58 miscellaneous. The 547 diseases are made up in part of 124 affections of the chest, one half being tuberculous; 110 are heart maladies, and 67 represent nervous troubles, of which 11 are epilepsy and 9 insanity.—*The Medical Times*.

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MAY, 1918

THE SEAL.

OF "THE NORTH AMERICAN ACADEMY OF THE HOMŒOPATHIC HEALING ART," LOCATED AT ALLENTOWN, PA.,
THE FIRST HOMŒOPATHIC MEDICAL COLLEGE
IN THE WORLD.

BY

JOSEPH C. GUERNSEY, A.M., M.D., BRYN MAWR, PA.

The Seal of "The Allentown Academy" as it was called, the first Homœopathic Medical College in the world, together with a large number of papers, diplomas, certificates, documents, letters, etc. relating to and narrating the early history of Homœopathy in Pennsylvania and the founding of said College, has been presented to the Hahnemann Medical College, Philadelphia, by Joseph C. Guernsey, M.D. *This Seal combined with the historical documents, constitute the most valuable archives of early Homœopathy, owned by any Institution in the world.*

"The Allentown Academy" was founded April 10, 1835, Samuel Hahnemann's birthday; on May 27, 1835, the corner stone was laid, in the presence of a large concourse of people and friends of the undertaking. Dr. Constantine Hering, who had been elected President of the Academy, delivered the "Inaugural Address" the original of which is among the papers which have come into the possession of "Old Hahnemann"—the next oldest Homœopathic College in the world!

As early as 1874 Dr. J. C. Guernsey began to collect data for the purpose of writing a history of the Academy, which will be found on Page 773, Vol. II., *Transactions of the World's Homoeopathic Convention*, held in Philadelphia, 1876.

At that time (1874) Dr. Constantine Hering, President of The Allentown Academy, Dr. John Romig, Vice-president of the Academy and Dr. Henry Detwiller, Secretary, also Dr. William Wesselhoeft, a member of the Medical Faculty, were still living and in active practice. Dr. Guernsey had numerous interviews with Dr. Hering who described in detail the founding of the Academy, also its principles and intentions; he visited Dr. Detwiller, Easton, Pa., and from him obtained the Seal of the Academy, a Minute book and other mementoes; he went to Allentown and interviewed Dr. John Romig through whom he received still further information and data; he corresponded with Dr. W. Wesselhoeft, Boston, who kindly contributed much valuable material connected with the Academy. All these gentlemen were most cordial and expressed pleasure that the existence of the first Homoeopathic College in the world was to be established and perpetuated by written history.

It is interesting to know that Dr. Henry Detwiller administered the first Homoeopathic dose of medicine in Pennsylvania, July 24, 1828. The case, one of retarded menstruation, accompanied by severe colic, was cured completely and speedily.

A condensed resume of the Allentown Academy is as follows:

On December 30, 1833, Drs. William Wesselhoeft, Henry Detwiller, and John Romig met at the house of Dr. C. Hering, who then resided in Philadelphia, to confer upon the establishment of a Homoeopathic School of Medicine. The result was the institution of "*The North American Academy of the Homoeopathic Healing Art*," to be located at Allentown, Pa., with Dr. Hering as President and principal instructor. Dr. Hering promised to move to Allentown and assume his new charge "as soon as he was guaranteed a salary equal to that of a first-class Allentown clergyman." It was planned to invite medical students to come to Allentown during the summer, there being no summer course anywhere in the country at that time, when only the science and application of pure homoeopathy should be taught. No opposition to such a scheme was imagined, as there was to be no interference with the

regular course of instruction in other medical colleges, and such violent opposition and persecution as ultimately arose was entirely unlooked for. A charter having been obtained, a stock company was formed for the purpose of raising funds to purchase a lot and building, and to support the institution. About one hundred subscribers from Allentown, Bethlehem, Philadelphia and New York, and in other parts of the country, raised enough money to buy a large block of ground in the centre of Allentown for the building which consisted of two wings of 60 x 40 feet each, three stories high, erected in a substantial manner of red bricks, and another two-story brick building was erected on Hamilton Street to serve for a chemical laboratory, anatomical and dissecting rooms. Also a botanical garden was laid out and stocked principally with officinal plants. The faculty consisted of Drs. C. Hering, Wm. Wesselhoeft, H. Detwiller, E. Freytag, John Romig, J. H. Pulte.

To show the high standard, the comprehensive medical education and liberal course of instruction aimed at, the whole of *Article XXIX*, from the "Constitution of the North American Academy of Homœopathic Medicine" is herewith presented: "The literary institution, according to the express design of its foundation, shall be as comprehensive in its operations as possible, and will embrace the following branches of study, as indispensable to the complete education of the physician, viz., clinical instruction, examination of the sick and semeiotics; pharmacodynamics and materia medica; pharmaceutics and medical botany; dietetics; special therapeutics, surgery and obstetrics; medical jurisprudence; general therapeutics; symptomatology and human pathology; physiology and anatomy; comparative anatomy and comparative physiology; zoology; phytology, and mineralogy; chemistry, physics, geology, astronomy and mathematics; history of medicine and of natural sciences; the Greek, Latin and German languages, as preparatory studies." Preliminary examinations of the students, before matriculation, were conducted by a committee. Candidates for diplomas were obliged to pass meritorious examinations in anatomy, physiology, pathology, materia medica homœopathia, homœopathic therapeutics, surgery and obstetrics. Two of the graduates, Drs. Charles Neidhard and Adolph Lippe told the author: "The possession of an Allentown diploma is an honor to its holder, because it

was obtained only by worthy applicants. Many who tried to pass were rejected as incapable."

A great amount of Homœopathic literature was published under the auspices of the Allentown Academy, including many valuable provings which have since become standard. In the latter part of 1836 Hahnemann's *Organon* and Jahr's *Manual* were translated into English and published. A weekly periodical was published by the Academy on medical, surgical and obstetrical subjects, embracing observations in and experiences from practice, etc., under the title, *Correspondenzblatt der Nord Americanischen Academy der Homocopathischen Heilkunst*, also, *Archiv Zettel*. Also, a very elaborate monograph of snake poison. All these literary labors were chiefly wrought by the indefatigable Dr. Hering, the heart and soul of the institution.

The "North American Academy of the Homœopathic Healing Art" unfortunately lasted but a few years. Its funds were placed in the Allentown bank, which was undermined and destroyed, by its head man, and everything was swept away. The academical buildings and lot were sold to satisfy a mortgage of \$9,000. Dr. William Wesselhoeft strove for several years to sustain the enterprise but in 1842 he removed to Boston whereupon the faculty ceased their labors.

ACKNOWLEDGMENT.

THE Hahnemann Medical College of Philadelphia acknowledges with great gratitude the immeasurably valuable donation of historic data and relics made by Joseph C. Guernsey, M.D. Dr. Thomas L. Bradford has classified and placed them in the College for public exhibition. No gift could have been more welcome and it is peculiarly fitting from the fact that Dr. Constantine Hering became as fully indentified with the Hahnemann Medical College of Philadelphia as he had been with the Allentown Academy.

In the Philadelphia Institution he occupied the Chair of Homœopathic Institutes and Practice of Medicine 1864-1868; the Chair of Homœopathic Institutes and Materia Medica 1868-71, and was Dean during the college years of 1867-1869 and 1870-1871.

W. A. PEARSON.

THE TREATMENT OF CHRONIC HEART FAILURE.

BY

G. HARLAN WELLS, A.B., M.D., PHILADELPHIA.

(A Clinical Lecture Delivered before the Students of the Homeopathic Department of the University of Michigan.)

BEFORE taking up the details of treatment allow me to remind you once more of certain fundamental principles.

First: That heart failure is simply inability of the heart to maintain the circulation under ordinary conditions.

Second: That heart failure begins by exhaustion of the reserve force of the heart and is perceived only when the heart has exerted itself to the fullest possible extent in the effort to maintain the circulation.

The object of treatment, therefore is to restore the exhausted heart muscle and reestablish a competent circulation. If we bear in mind the advice of Hahnemann to *discover what is curable in disease* we will not waste any time in efforts to do away with valvular murmurs, to absorb calcareous deposits in the walls of the arteries, or attempt any other impossibility in cardiac therapeutics. Experience has long since demonstrated that if the condition of the heart muscle is normal it is possible to maintain an adequate circulation despite the existence of these mechanical alterations in the cardio-vascular system.

REST.

Rest naturally occupies an important place in the treatment of heart failure. The heart receives its nutrition during the period of diastole and it is only by diminishing the physical exertions of the patient that we can reduce the amount of burden placed upon the heart.

In the more marked degrees of heart failure, absolute rest in bed is essential to successful treatment. It is important to remember that this rest should be mental as well as physical and all excitement in the way of visitors, business worries, etc., should be excluded. In the milder forms of cardiac failure it may be sufficient to have the patient reduce the amount of daily work and to take more rest in a recumbent position than he has been accustomed to doing. A rest for an hour or two

during the middle of the day has proven of great practical value in a large number of chronic cardiopaths.

DIET

The supplying of sufficient nourishment of the heart muscle without producing digestive disturbance necessitates close attention to the diet. There is no diet of specific value in all cases. Osler remarks that the stomach is not only a near but a bad neighbor to the heart and, all foods that tend to distend the stomach with gas are to be carefully avoided. Where digestive powers are reasonably good and the heart not seriously embarrassed, a diet consisting of milk, eggs, soft vegetables and a moderate amount of meat may be permitted. In severe cases, especially those associated with oedema, the diet must be decidedly restricted. I have found the white of eggs flavoured with a little orange juice and some form of milk, to the amount of sixteen to twenty-four ounces, to be well borne. Tea, coffee and tobacco should usually be discontinued and the restriction of salt is often beneficial. Where generalized anasarca is present, the Karrel diet, consisting of six ounces of milk every six hours, is often decidedly helpful.

EXERCISE.

It is possible to carry the principle of rest too far in the treatment of chronic heart disease. Every organ in the body is benefited by proper exercise and this same rule applies to the heart. Many sufferers from heart disease are nursed too much and consequently never improve beyond a certain point. Exercise should, under all conditions be carefully regulated and should be followed by periods of rest. Unusual acceleration of the pulse, pain about the heart, or exhaustion, are signs that call for a diminution or discontinuance of the exercise.

HYDROTHERAPY AND MECHANO-THERAPY.

Hydrotherapy is a method of treatment in heart disease that has been largely exploited but which in my judgment is of but limited value. The Schott baths which have occupied such a large proportion of the literature, are in my judgment utterly useless. I believe that all the beneficial effects ascribed to them can be accounted for by the general system of

rest and of mental diversion followed by patients who go to Nauheim to take the baths.

Certain mechanical therapeutic measures are of considerable value in selected cases of chronic heart failure. Massage properly applied may be very beneficial following the rest cure before the beginning of more active exercise. Percussion along the spine, especially about the seventh cervical and the upper dorsal vertebra, as advocated by Abrams, or vibratory stimulation applied to these same areas, has proven distinctly helpful in some cases that have come under my observation. In this connection allow me to warn against the employment of violent forms of manipulation in patients suffering from any distinct degree of cardiac impairment. Death has occurred as a result of such manipulations in at least two cases that have come under my observation.

MEDICINAL TREATMENT.

The medicinal treatment of chronic heart failure can best be considered under two headings:

- I. Physiological medication.
- II. Homeopathic medication.

Each of these methods of drug treatment has a definite place in the treatment of chronic heart failure, and each has very positive and distinct indications. The practice of administering so-called heart stimulants indiscriminately is mentioned only to be condemned. Fortunately for the patient, the majority of these so-called heart stimulants exert very little effect upon the heart, consequently they are less harmful than would be the case otherwise.

In my experience there are five remedies that may at times be used in physiological doses with benefit in the treatment of chronic heart failure, namely:

- Digitalis—Fibrillation—Dilatation.
- Stropanthus—Fibrillation—Dilatation
- Theobromine—Dilatation with dropsy.
- Strychnine—Vaso-motor relaxation.
- Morphine—Insomnia and dyspnoea.

Digitalis is by far the most important of these remedies. Introduced in 1785 by Withering, and was used more or less indiscriminately as a routine remedy especially in cases of

dropsy. It occasionally produced the most brilliant results, while in the larger proportion of cases in which it was administered, it failed to have any beneficial effect. We know today that the beneficial effects of digitalis are due to its ability to control fibrillation of the auricle and that brilliant results from its use can be expected only in those cases of cardiac failure that are accompanied by auricular fibrillation.

As a general rule, it may be said that in those cases of heart failure, with or without dilatation, in which the pulse is regular, very little benefit can be anticipated from its administration. In using a remedy as potent for good as digitalis, it is a wise plan to familiarize one's self with two or three reliable preparations and stick to them. Many preparations of digitalis are entirely inert, particularly the widely sold compressed tablets containing digitalis alone, or combined with other medicinal substances. After considerable experimentation in hospital and in private practice, I have found the best results from three preparations of digitalis: The tincture, the powdered leaves and digalen.

The tincture of digitalis is a widely useful preparation because it is readily administered and in the average case will give uniformly satisfactory results. It is essential that the tincture should be physiologically tested, as many of the cases in which we wish to employ it, are so serious that we cannot afford to work with an untested drug. The dose of the tincture of digitalis in well advanced cases of circulatory failure associated with auricular fibrillation, is about fifteen to twenty drops four times daily.

The powdered digitalis leaves, from a theoretical standpoint, should be the best preparation of the drug as they contain both the aqueous and alcohol soluble principles of digitalis. In practice, I have found the powdered leaves to be very efficient and usually administer from three to six one grain capsules daily in cases of distinct heart failure with fibrillating auricles.

It is at times very important to have a preparation of digitalis suitable for hypodermic or intravenous use and, for this purpose, I know of no preparation that is comparable with digalen, a soluble preparation of digitoxin. This preparation is put on the market in the form of hypodermic tablets which

can be injected under the skin, about three or four times daily in serious cases.

No matter what preparation of digitalis is employed, it is important to follow its administration with care and to reduce the dose as soon as the pulse rate is lowered to eighty beats per minute and the normal rhythm, partially or completely restored. Under such conditions, it is my rule to cut the dose in half and then to still further reduce it as the patient improves.

We hear a great deal of the so-called "cumulative" effect of digitalis, and I have observed a number of such cases all of which, however, were due to a continuance of large doses of the drug after its therapeutic effect had been established. In this connection, permit me to say, that a sudden falling off in the urinary output should call for a distinct reduction in the dose of digitalis at once.

When properly administered in cases with suitable indications, the effect of digitalis is little short of marvellous. Patients, who are cyanotic, water logged and almost moribund, may be literally brought back from the grave, and their lives prolonged and in some instances for many years. It is a remarkable fact that very small doses of the drug may be sufficient to maintain a normal and efficient cardiac action over a period of many years.

Before closing my remarks on digitalis, permit me to reiterate that the routine practice of giving digitalis to every patient suffering from disease of the heart, is a procedure that is not only useless but positively harmful.

Stropanthus ranks next to digitalis in practical efficiency as a cardiac stimulant. A great deal has been written by pharmacologists about the superiority of stropanthus over digitalis, but, practically speaking, it is a drug greatly inferior to digitalis and one which only rarely succeeds when digitalis fails. It is indicated in practically the same type of cases in which we find digitalis valuable, namely, in cases of circulatory failure with fibrillation of the auricle. The dose of the drug is from five to ten drops of the tincture three or four times daily. The active principle of stropanthus has been widely advocated for intravenous use in doses of 1/200th of a grain in extreme cases of circulatory failure with fibrillation. I have seen instances in which it proved quite valuable, as its action is almost immediate and will support the heart until

the more slowly acting digitalis can be administered by mouth.

The tincture of *strophanthus* can be used in cases of circulatory failure with fibrillation, in which digitalis fails and the same principles of dosage apply to this drug as to digitalis.

Theobromine is a valuable drug in well advanced cases of heart failure associated with anasarca and accompanied by a regular pulse. In this respect, it stands in marked contrast to digitalis. The pure alkaloid is insoluble. I ordinarily prefer the sodium acetate of theobromine, five grains being given every two or three hours in a capsule. In favorable cases its administration is followed by marked increase in the urinary output, by a gradual depletion of the dropsy and by a marked improvement in the symptoms of circulatory failure. The administration of the drug should not be continued over too long a period on account of its tendency to produce some renal irritation. As soon as the output of urine is increased to a satisfactory degree, it is our custom to reduce the dose of the drug to five grains every four hours and to discontinue it entirely for a period of five or six days. The amount of urine that may be passed by a patient under the influence of theobromine is sometimes astonishing. I have seen marked dropsical conditions disappear under its use in four or five days. In other cases in which its use is apparently indicated, it is followed by no improvement whatever, and if, after being administered for a period of four days in reasonably large doses, the diuretic action of the drug does not appear, it is best that its use be entirely discontinued.

Strychnine, despite the almost idolatrous respect with which this drug is regarded by the majority of physicians is of limited usefulness in actual practice. It seems to have little or no action directly on the heart. There is no doubt, however, but that it does improve the tone of the vaso-motor system and, in this way, as well as its influence in improving the digestive functions and appetite, it is at times of value in the treatment of chronic heart failure. It is, however, in no sense a substitute for digitalis or for theobromine and should never be given to the type of cases in which the above mentioned drugs are indicated. In the presence of general anasarca and cyanosis it is practically useless.

Morphine is, at times, an invaluable drug in the treatment of heart failure. Its usefulness lies in the fact that it gives the patient the ability to breathe and to sleep and may prove a

life saver by thus enabling an exhausted patient to get needed rest and to recuperate his vital energies. The too frequent usage of morphine, however, has the disadvantage of causing an accumulation of carbonic acid gas in the blood and it should be used with great skill and caution. Its most brilliant results are manifested in those patients who have been deprived of sleep and rest for several days on account of the suffering that accompanies cardiac dyspnoea.

HOMOEOPATHIC MEDICATION.

The success of the homeopathic treatment of chronic heart failure depends, of course, upon the careful adaptation of the remedy to the symptoms present. It is impossible in this paper to give a list of all the remedies that might prove useful. I shall, therefore, merely attempt to give an outline of the most commonly indicated ones that have proven valuable in my personal experience.

| | | |
|---|---|---------------------|
| Remedies for mild cases of heart failure | { | Aconite |
| | | Adonis |
| | | Arsenicum iodidatum |
| | | Cactus grand. |
| | | Calc. phos. |
| | | China |
| | | Crataegus |
| | | Ferrum |
| | | Lycopus |
| | | Nux vomica |
| | | Pulsatilla |
| Remedies for severe cases of heart failure | { | Apis mel. |
| | | Apocynum |
| | | Arsenicum alb. |
| | | Chin. arsen. |
| | | Digitalis |
| | | Lachesis |
| | | Phosphorus |
| Remedies for senile cases | { | Stropanthus |
| | | Arsenicum alb. |
| | | Arsenicum iod. |
| | | Aurum mur. |
| | | Digitalis |
| | | Lycopodium |

Starting with the mild forms of heart failure, I have found great benefit to be derived from the group of remedies that influence the nutrition of the heart muscle and the bodily nutrition in general. Among the most important of these may be mentioned *nux vomica*, the iodide of arsenic, *calcareo phosphorica*, *ferrum*, *chininum arsenicosum*.

Nux vomica I believe to be applicable in a larger number of cases of heart failure than is ordinarily supposed, particularly in the type of cases that are associated with flatulency, digestive disturbances, constipation and nervous irritability. Many cardiac disturbances resulting from the excessive use of tobacco and alcohol will disappear under the administration of this drug, and I believe that its more extended use in this connection would be attended with more benefit to our patients.

Cactus, *crataegus*, *adonis* and *lycopus* are a group of remedies in which symptoms relating directly to the heart, predominate. I have found *cactus* and *crataegus* especially useful in those cases of beginning heart failure in which subjective symptoms in the region of the heart were prominent, such as a feeling of constriction around the heart and pain running up under the left clavicle, soreness to pressure in the precordial region. These symptoms at times are accompanied by slight edema of the extremities and by breathlessness on exertion.

Aconite is a remedy of exceptional value in both acute and chronic diseases of the heart accompanied by painful sensations in the heart, especially if these sensations produce a nervous restlessness and a fear of death.

The *chloride of gold* is especially useful in the patient with the sclerotic heart and arteries, accompanied by general physical disability and mental despondency. While we cannot expect to restore this type of patient to complete health, we may prevent the progress of the vascular degeneration and preserve his mental faculties for many years by the use of this drug.

Lycopodium is especially adapted to the senile cases with marked flatulency and intestinal toxemia. This drug, I believe ordinarily acts better in a moderately high potency such as the sixth or twelfth and its use can frequently be continued with benefit over a long period of time.

Digitalis. In cases of senile heart with irregularities due

to auricular fibrillation, digitalis not only contributes a great deal to maintain the patient's comfort and usefulness but may actually prolong life many years. I have seen one grain of powdered leaves daily produce just such results in more than one case. At times, of course, larger doses may be necessary.

In closing this resume of the medical treatment of heart failure, permit me to urge upon you the advice of Hahnemann:—remove every obstacle to the cure before prescribing for a patient suffering with heart disease and when you have done so, you can administer the indicated remedy with the confident expectation of materially improving the patient's health.

SICK-WASTAGE IN THE ARMY AND INFLAMMATION OF CONNECTIVE TISSUE AS AN IMPORTANT CAUSATIVE FACTOR.

BY

LIEUT. T. L. DOYLE, M.R.C.

(Lieutenant Doyle was until recently a resident physician in the Hahnemann Hospital, Philadelphia, and is now with the British Expeditionary Forces in France. Most of this article was written within forty yards of the German trenches.—*Ed.*)

WITH apologies to any reader who may deem my subject rather elementary, and hoping they will realize the adverse conditions under which I am laboring—were they to picture me trying to concentrate on past experiences in a Regimental Aid Post on the Western Front—seventy yards from a German trench.

In my short though varied experience with the British Army, from early in September, when stationed as House Surgeon in a Base Hospital, to my present post as a Regimental Medical Officer, I have noticed with no little alarm (when we consider that the mighty army of the United States is bound to pass successively through the same stages) the enormous amount of cases evacuated from what primarily are trivial complaints, and how the ultimate strength of the fighting force is affected by them. To the average civil practitioner my subject may seem of little interest, but assuming that the

majority of men will feel concerned about the maintenance of health among our troops in our present emergency, is why I deem it of no little importance.

To the medical man in military service, the sick-wastage of his unit is a vital problem, no matter whether that same body of men be combatants or non-combatants, and *why?*

First—Because every increase in sick wastage means decrease in the strength of the fighting unit.

Second—Because of the manner in which it eventually reflects on the individual personally, relative to his competency as a scientific man.

In these days of modern warfare, we, as medical men, are judged to a greater degree, not by the manner in which one may prove his special ability at some particular time but by constantly exhibiting a certain degree of proficiency in preventive medicine and by quick return of all unpreventable cases to their respective units when unforeseen complications arise which, for the benefit of the afflicted one favor evacuation to the base.

While the major portion of the responsibility falls upon the shoulders of the medical officer, he must, in order to maintain a certain standard, elicit the support of all individuals concerned. This can be accomplished in only one way, namely, by proving yourself a friend of every man and by willingly sharing his burdens if need be. In dealing with the majority it is best to exhibit no favoritism, and whether the patient be officer or private, let the ultimate decision be unbiased. One can very easily strike a happy medium between being too harsh or the reverse. Occasions will arise, no doubt, when it may be necessary to return a man to duty although he may be feeling none too well; however, do not do so before giving him some idea as to the nature of his illness and how you propose to remedy the same. The more one sees of army life, the firmer the opinion holds that a medical officer, while still demanding the respect of all, is in a better position to be the comrade of the soldier than is a similar officer of any other rank.

Confidence being established among the personnel they will report their trivial complaints early, relieving you of much anxiety and blame.

In order to strengthen my statement of trivial conditions, permit me to say that, during the months of November, December and January, two-thirds of the sick-wastage occurring

in the army in our particular sector had its origin in such condition as inflammation of connective tissue, scabies and pyrexia of unknown origin, in which latter category we find quite a few cases of influenza. Now, while the latter cases are practically unavoidable with the exception of Trench Fever which, if certain statements are correct, is traceable to the body louse, although bacteriologists have failed to isolate the germ; there remain as our two chief causes—inflammation of connective tissue and scabies.

Before dwelling on any one condition, let me say that from personal experience our two main factors can be eliminated only by routine examination of all men, weekly if possible, and never allowing more than ten days to elapse without expecting bad results. With early diagnosis, rapid recovery is possible and our primary object is attained.

As inflammation of connective tissue in no few instances follows secondarily from acarus invasion, one will try to elucidate its cause and apply the treatment we have found worthy of attention. Having taken short histories on some several hundred cases one finds that in relative importance they assume the following positions:

Inflammation of connective tissue:

I. As a result of parasitic invasion by lice and acarus scabies, with secondary infection.

II. As a complication occurring in both seborrhoeic and acne-prone individual.

III. By infection of external abrasions of the skin due to innumerable causes.

IV. In a certain number of cases of infection with pyogenic coccid of such skin conditions as herpes, impetigo, etc.

Under my first classification, we are at present and will continue throughout the entire war to cope against fearful odds with a most formidable foe.

Regarding this particular enemy, the Royal Army Medical Service, by constant devotion to modern hygiene and sanitation, has reduced the means of transmission about 50 per cent.; but, regardless of care exercised in groups of men, each time we seem to be fanning a latent fire. In dealing with the parasitic problem we have inaugurated the following system:

Taking the infantry soldier as an example. After leaving the trenches at the completion of a six day tour, the following day he is paraded by the battalion commander for a bath—

either shower or tub. He enters a building which is divided into several partitions. In the first room all clothes are removed after which he walks to a counter where he gives over all apparel to bath orderly with the exception of his boots. His soiled underclothing is thrown aside and his service jacket and trousers are immediately put into a delousing chamber. Here they are hung on pegs and exposed to dry heat at a minimum temperature of 165 degrees Fahrenheit for a period of twenty minutes, after which all seams are carefully ironed. Practical demonstration shows that after this procedure the eggs of the louse are destroyed, as all albumin proves to be coagulated. While his clothes are being thus treated, the individual has bathed, received a clean suit of underclothing and socks and on entering a room at the opposite end of the building his uniform is returned.

As the chief source of transmission of the ascarus is by blankets, the most efficient way of coping with it seems to be by the systematic running of all blankets through a thresh where they are enveloped in live steam for a period of thirty minutes at a temperature of 220 degrees F. This system seems to be practiced by all units once a fortnight. In the event of a case arising in a billet, the same case is thoroughly cleaned, all blankets are recalled and isolated and sent to the disinfecting chamber as soon as possible.

As a complication in the acne and seborrheic-prone individuals, we are usually dealing with a mixed infection, and culture from inflammatory surfaces show acne bacillus, staphylococcus albus or perhaps a weak growth of streptococcus pyogenes aureus. The type of acne usually encountered is what recent writers place in a separate category and describe as the true "pustular type." We find this condition bearing no relation to the age of the individual affected, occurring in the same ratio to men over thirty as those of lesser years. A peculiar phase of this same condition is that it spreads with the same rapidity as impetigo with which condition it is oftentimes confused—only the sites of predilection are as of old—neck, shoulders, buttocks, inner surfaces of thighs, etc.

It would seem strange to one in civil life to pay particular attention to a slight abrasion of the skin, no matter what his life or occupation may be. In my opinion the majority of lesions arising from this particular cause in the infantry soldier originate in the lower extremities. Rough undercloth-

ing is an important factor, with ill-fitting boots, especially noticeable after a long march, running a close second. Here is where intimate relations between the medical officer and soldier are important, and here the individual can aid you early by promptly reporting sick.

Our last causative factor is rare and, together with being so rare, it is also the first reported. Luckily, we find these primary conditions always developing on exposed areas, and as face and bearded regions are mainly affected, daily shaving is painful and permanent disfigurement may follow.

As to the pathology of the inflammation of connective tissue, we find all progressive stages of inflammation with, however, little demarcation until late, from surrounding tissue. In neglected cases, one may see marked cellulitis of an extremity with marked enlargement of nearest chain of superficial glands. In several cases marked suppuration of lymphatic tissue and mild toxemia develop.

Regarding treatment: Absolute cleanliness is quite sufficient. Our scabies cases are getting three days sulphur treatment on which occasion they get a hot bath followed by an inunction of 1 per cent. sulphur ointment at the completion of which they receive hot baths once daily for the remaining eleven days. After two weeks they can be sent back to the unit with little or no fear of transmitting the infection.

In treating superficial infections all sorts of antiseptic infections have been used and the ultimate result is about the same.

A 5 per cent. solution of picric acid proves very useful after pus has been eliminated and hot moist boric acid compresses, frequently applied (about three hours intervals) hasten regenerative changes.

Flavin, a preparation made of acri flavin, grs. 6 to a pint of normal saline which before use is diluted 1:5; ensol, a modified Dakin solution and bismuth, iodoform and petroleum paste should also be considered.

THE HEMORRHAGIC DISEASE OF THE NEWLY BORN.
WITH REPORT OF A CASE.

BY

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PHILADELPHIA.

Read before the Philadelphia Society for Clinical Research.

Record of Case of Baby R.:

Mrs. R., twenty-eight years of age; admitted to the wards of West Philadelphia Homœopathic Hospital, February 1, 1918; pregnant eight months. Previous history of mother: she was delivered six years ago of a baby who is now living and well. There was a history at that time of uterine inertia, resulting in forceps delivery after three days' labor. Her sister had a record of five deliveries by forceps.

At the time of admission to the hospital she was rather debilitated and had a pulse that varied from seventy-two to one hundred. On February 16th her pulse went up to 108 and it was deemed advisable to deliver her which was done by Dr. Culin by internal podalic version. She bled freely but not exceptionally. It was necessary to resuscitate the baby by artificial respiration and the use of ether on the chest. The baby a male, weighed between six and seven pounds and apparently was healthy and well nourished. At that time both eyes were normal. Delivery occurred at 4 P. M. on the 16th and, at 9 A. M. on the 17th of February, the resident physician noticed rather free bleeding from both eyes. Dr. Whinna was called, and on examination of the under surface of the upper lid of the right eye there was seen a moderate sized mass of granulation from which oozing blood could be seen. However, the oozing also came from the under surface of the eyelids of both eyes. Iced compresses were ordered at once and adrenalin chloride solution 1/1000 was dropped in the eyes every two hours. This was continued all day of the 17th and 18th without any result. On the 18th, Dr. Whinna asked us to see the case. Zinc sulph solution, one-half grain to the ounce, was tried without any result. The use of a pressure bandage only resulted in the formation of a large clot in each eye under the lids. At 2 A. M. on the 19th, 10c. c. of the

mother's blood was withdrawn and injected subcutaneously in the left infra-scapular region of the baby. At 11 A. M. the same morning, 12 c. c. of the mother's blood were injected; at 2 P. M. the same day 48 c. c. of the father's blood was injected. At 1 A. M. on the 20th 460 mg. of coagulose solution was injected subcutaneously, this being about 7 grains of dried coagulose. The baby died about 2:30 A. M. the same day and stopped bleeding shortly before death.

According to the nurses' report the baby nursed well all the time. It was not possible to tell whether there was any blood in the feces, as no chemical examination was made, they looked black and tarry, being still in the meconial stage. There was no vomiting. The color of the blood which oozed from under the lids was a clear bright red, and at no time was there a discharge of any mucus or pus. The mother admitted that her blood had been examined years before but did not know for what purpose the test was made. The Wassermann test was made of her blood two days after the baby's death, the result being negative; no Wassermann was taken of the husband.

HEMORRHAGIC DISEASE OF THE NEWLY BORN.

The hemorrhagic disease of the newly born is a comparatively rare condition met with during the first week of infancy and characterized by hemorrhage in or from any organ or mucous membrane of the body.

It is more frequently seen as melena neonatorum which, strictly speaking, is a term limited to bleeding from the intestines, but in a broad sense it may be applied to any spontaneous hemorrhage in the newly born.

Its etiologic or causative factors are rather obscure; as general predisposing causes may be mentioned, fragile blood vessel walls, and the alteration of circulation incident to the transition from fetal to extra-uterine life. Syphilis is responsible for a small percentage of cases, invariably is this true when the hemorrhages occur from the nasal mucous membrane. The leading role, however, seems to be played by sepsis or infection of some kind, which probably explains the reason of its greater frequency in hospitals and institutions than in private practice. Thus in sixty-one cases observed by Epstein in the Foundling Asylum of Prague, twenty-nine were associ-

ated with sepsis, and in the Prague Lying-In Hospital, of one hundred and ninety cases observed by Ritter, twenty-four were due to infection. During the year of 1899, at the New York Infirmary for Women and Children, there occurred an epidemic of ten cases which ceased as soon as the cases were properly isolated,—a circumstance which points strongly to an infectious origin of this hemorrhagic disease.

Sepsis in the infant as in the adult may be caused by a variety of bacteria. Many of these cases examined bacteriologically have shown in the blood and organs, pure and mixed cultures of the pyogenic cocci, diplococcus-pneumoniae, bacillus coli communis, the gonococcus of Neisser, the influenza bacillus and others. Gartner has described a specific organism the “melena bacillus” which he found in two cases, but as yet no one has confirmed his findings.

The portals of septic entry may be the mouth, from abrasions or fissures of the mucosa; the umbilicus, infection usually taking place before the separation of the cord; the skin, through traumata to which it is exposed; the placenta through bacteria circulating in the mother’s blood and breaking through the placental vessels. The infant may also become infected in its passage through the birth canal.

Then, there are some cases which, in spite of the most thorough investigation remain unexplained either by clinical examinations or post-mortem findings. Autopsy in the majority of cases reveals nothing but hemorrhages in various locations with blanching of the mucous membrane or organ from loss of blood. The stomach and intestinal canal may contain blood in various states of disorganization, there may be ecchymoses of the mucous membrane, and, in a small proportion of cases, ulcers of the stomach and duodenum may be found, but what the origin or cause of these ulcers is has never been satisfactorily explained. Some claim they are the result of inflammatory changes, others that they are embolic in origin.

The blood shows marked changes; there is a decrease in the number of erythrocytes, a deficient coagulability undoubtedly due to the action of toxins and a destruction of the red cells.

Symptoms.—The onset is usually during the first week of infancy, the hemorrhages are as a rule multiple. In many cases nothing is noticed until the hemorrhage begins; the

bleeding may be from the stomach, intestines, the umbilicus, beneath the skin or any mucous surface. The amount of blood lost may not be necessarily great but there is a continuous oozing, this oozing is accompanied by considerable prostration; there is rapid loss of weight; the temperature may be high, low or subnormal and may not be dependent upon the hemorrhage, but from associated conditions. There are marked evidences of anaemia and sometimes diarrhoea.

Hemorrhages of the Brain.—Are usually diffuse, come from the meningeal vessels and are accompanied by paralysis of the various parts.

Hemorrhage from the Conjunctiva.—Usually comes in drops from between the eye lids chiefly from the tarsal surfaces and may be preceded by conjunctivitis.

Hemorrhages From the Nose.—Are rarely profuse but frequently repeated and are oftener due to syphilis than to any other cause.

Hemorrhage From the Mouth.—The quantity of the blood is not large; it may arise from the mucous membrane of the mouth, pharynx or bronchi and may be associated with fissures of the lips, ulcer of the hard palate or the various stomatites.

Umbilical Hemorrhage.—Occurs rather later than that from the mucous surfaces, the bleeding may be into the cord as well as from its free extremity. It may consist of only a slight stain upon the dressings or may show itself as a gush of blood; it must not be mistaken for the oozing following an improperly applied ligature which is easily controlled.

Hemorrhage from the Stomach and Intestines.—Is more frequently seen than in any other location. There is vomiting of dark brown masses, more rarely bright red and not very profuse. The vomiting may be induced by nursing; the stools are dark and tarry looking with blood and feces intimately mixed and are very apt to be mistaken for meconium; microscopical examination or a chemical test for hemoglobin however will determine the presence of blood.

Hematuria.—The urine may be stained with blood or may contain clots; the bleeding may originate in the bladder, urethra or kidneys.

Hemorrhage from the Female Genitals.—sometimes occurs and must not be regarded as precocious menstruation.

Subcutaneous Hemorrhages.—Usually appear in places

exposed to pressure such as the sacrum, heels, occiput and back. When occurring alone or as the principal lesion, the prognosis is decidedly favorable.

Diagnosis.—Multiple hemorrhages from various mucous surfaces or into the organs, in the newly born, with a history of syphilis or evidence of sepsis usually makes the diagnosis easy. Slight hemorrhages from the intestines are apt to be overlooked. Large hemorrhages into the internal organs are somewhat obscure and not often recognized.

The one condition most likely to be confused with the hemorrhagic disease is hemophilia. Hemophilia is very rarely seen in the earlier months of infancy; it usually affects males and is transmitted to the child as a rule through the mother; on the other hand it has no tendency to spontaneous recovery as has the hemorrhagic disease. Cases have been recorded where circumcisions have been performed within a few days of the cessation of the hemorrhage without unusual bleeding. Holt reports a case which came under his notice in which there was extensive subcutaneous hemorrhage with bleeding from the navel which ceased before the separation of the cord.

One must be careful to distinguish melena neonatorum from melena spuria so-called—spurious hemorrhages from the stomach and intestines, the result of swallowed blood, the source of which may be the mouth, nose or pharynx and from fissured lips or nipples.

Prognosis.—Much depends upon the severity of the hemorrhage, the vigor of the child and its ability to take nourishment. Seemingly hopeless cases have recovered. However, the prognosis is very unfavorable. Townsend, of the Boston Lying-In Hospital, of 709 cases had a mortality rate of 79 per cent.

TREATMENT.

Nutrition should be maintained by careful feeding. If there be a fall of temperature, the infant should be wrapped in absorbent cotton and flannels and kept warm by the use of hot water bags or bottles. To support the heart when large quantities of blood have been lost the subcutaneous injection of normal saline solution, the Murphy drip, the judicious use of tea, coffee, camphorated oil or other stimulants may be employed. For the hemorrhage itself suprarenal extract two

grains or more every two hours. Calcium lactate five grains four times daily (to make up the calcium deficiency lacking in the blood.) Injections of sterile horse serum or coagulose in fifteen to thirty c. c. ($1/2$ to 1 oz.) doses three or four times daily may sometimes give results. In bleeding from the stomach or intestines gelatin has many advocates. An absolutely sterile 10 per cent. solution of gelatin is injected subcutaneously in doses ranging from ten to twenty-five c. c. (2 to 6 drms.) two or three times daily. At the same time a two to five per cent. solution may be given by mouth in one drachm doses hourly or if not retained it may be given in one ounce doses per rectum. The latest addition to the treatment of this condition is the subcutaneous use of human blood serum as first suggested by Dr. Welch of New York.

The blood of any healthy adult may be used under sterile conditions, the quantity to be employed should be from twenty-five to fifty c. c. three or four times daily, and should be repeated as long as any tendency to hemorrhage exists. Larger doses may be used without danger. Should this fail, the only resource remaining is direct transfusion whenever practicable. Locally for external hemorrhages, adrenalin, Monsell's solution fused chromic acid crystals or silver nitrate stick are recommended.

INFECTIVE PANCREATITIS.—Whether we regard chronic infective pancreatitis as a surgical disease will depend upon our acceptance of the general belief that, as a rule, it is secondary to infective disease of associated organs. For there is nothing that we can do in the way of direct attack upon the pancreas that will promise relief. In the cases, relatively rare, of obstruction of the common bile duct by the swollen or indurated pancreas at the point where the duct tunnels the retro-duodenal portion of the head, as it does in two-thirds of all cases, it is manifestly proper to perform a short-circuiting operation in order that the bile may be conducted into the intestine. This is best effected by an anastomosis between the gall bladder and duodenum. In case of doubt as to the feasibility of this operation the stomach may be used, or failing this, the intestine. If the gall bladder has been removed or is too much diseased the common duct must be implanted into the duodenum. But these are operations not for chronic pancreatitis per se but for the consequences of chronic pancreatitis. When the pancreas has reached the stage of induration with deposits of fibrous tissue between the acini or lobules, with atrophy of the parenchyma, cure is no more to be thought of than in contracted kidney. The damage is done and nothing remains but palliation.—John B. Deaver, in the *Boston Medical and Surgical Journal*.

THE CONTROL OF TUBERCULOSIS IN NEW YORK CITY.

BY

WALTER SANDS MILLS, A.B., M.D., NEW YORK CITY.

Physician to the Tuberculosis Infirmary, Metropolitan Hospital Examiner
for the New York State Hospital for Tuberculosis, Physicians'
Tuberculosis Clinic, Department of Health.

THE present status of the tuberculosis problem in New York City is the outgrowth of the discovery of the tubercle bacillus in 1882 by Koch. This placed tuberculosis in the list of infectious diseases.

In 1896 the Department of Health of New York City requested physicians to report all cases under their care. This was later made compulsory.

Until 1902 cases of pulmonary tuberculosis that required hospital care were treated in the city hospitals and placed in the general medical wards. It was so when I was an hospital interne in 1889 to 1891. It was still the custom when I became an attending physician at the Metropolitan Hospital, Department of Public Charities in May, 1897. As tuberculosis formed a considerable proportion of our chronic medical cases, during my years as an interne and later, they were placed together in the wards as a matter of convenience.

In 1901 some buildings on the Metropolitan grounds, until then occupied by insane patients, were vacated. By resolutions passed by the Medical Board of the Metropolitan Hospital a committee was appointed to ask the then Commissioner of Public Charities, the Hon. John W. Keller, if one or more of these buildings might not be used to segregate our tuberculosis patients. Commissioner Keller approved of the idea, but as his term of office expired before the buildings were ready for occupancy, he said he would leave final decision for his successor.

January 1, 1902, Mayor Van Wyck and his Commissioner of Public Charities went out of office. The new mayor, the Hon. Seth Low, appointed as his Commissioner of Public Charities the Hon. Homer Folks. The Medical Board of the Metropolitan Hospital, through its committee, presented their request to Commissioner Folks during his first week in office,

if I mistake not, on January 2nd. He gave his approval and the thing was done.

Commissioner Folks a few days later asked the advice of the Academy of Medicine. The academy appointed a committee, consisting of Dr. E. G. Janeway, Dr. H. P. Loomis, both since deceased, and Dr. Alfred Meyer, to visit the buildings on Blackwell's Island and report back as to the feasibility of using them for tuberculosis patients. About the middle of February this committee visited the Metropolitan Hospital, and by appointment, met the Metropolitan committee, Dr. J. W. Dowling, now dead, Dr. E. G. Rankin and Dr. W. S. Mills. They found one building already filled with patients, some ninety to one hundred. This building had been occupied since January 30th. No report from the Academy of Medicine ever reached the Medical Board of the Metropolitan Hospital officially, but the public press had it that the distinguished committee of the academy reported to their fellows that in their opinion Blackwell's Island was not a fit place for consumptives.

However, from that time on all consumptives in the hospitals of the Department of Public Charities and in Bellevue and the allied hospitals were sent to the Metropolitan Hospital until the Sea View Hospital on Staten Island started by Commissioner Heberd was opened by Commissioner Drummond during the administration of Mayor Gaynor. Since then the less sick patients have been sent to Sea View. This hospital has very recently been taken over by the U. S. Army.

During the first administration of Mayor McClellan, Commissioner Tully was asked to make a separate institution of the Tuberculosis Infirmary of the Metropolitan Hospital. It was after his refusal to do so that the Department of Health established a hospital for tuberculosis on North Brothers Island.

It was in 1907 or 1908 that special tuberculosis clinics were opened throughout the city. At first special clinics were established in several already existing hospital out-patient departments throughout the city, and the Department of Health started with one at department headquarters.

At the present time, 1918, there are thirty tuberculosis clinics throughout the city: twenty belonging to the Department of Health, three to Bellevue and the allied hospitals, and seven belonging to private corporations. These last, all in

Manhattan, are the German Hospital Clinic, Mt. Sinai, New York Dispensary, New York Hospital, Presbyterian, St. Luke's and Vanderbilt Clinic. Of the Health Department Tuberculosis Clinics, seven are in Manhattan, two in the Bronx, one on Staten Island, six in Brooklyn, four in Queens. Each clinic is for cases within a certain area. If the first visit is made out of his district the patient is referred back to his home clinic.

The tuberculosis clinics of the Department of Health are open every week day from 2 to 4 P. M. There is a special clinic for children on Saturday mornings from 10 till 12. There is a clinic for patients who cannot come during the day time on Thursday nights from 8 till 9.

The personnel of each clinic consists of two or more physicians and a throat specialist. There are also several nurses in attendance.

These clinics were started first as a sort of experiment and the physicians were volunteers interested in tuberculosis who served without pay. At present clinic physicians are all on the civil service classified list, and are paid a nominal salary. The majority of physicians receive twenty-five dollars a month, some fifty, a few fifty-five. There seems to be no particular system about the salary, as length of service or special ability have nothing to do with the amount paid.

The nurses, also civil service, start at seventy-five dollars per month, and some get as much as one hundred. The nurses' hours are from 9 to 5. Their mornings are spent in making social service calls on clinic patients, giving advice as to rules to be observed at home, getting other members of the family to report to the clinic for examination, giving aid in various ways, and doing other useful social work. The nurses are in attendance at the clinic during the hours it is open. There they make out histories, weigh each patient, and take temperature, pulse and respiration of each patient on each visit. The rest of the time is spent in making out the voluminous reports required.

Patients are thoroughly examined on the first visit, and as often thereafter as seems necessary. Quite a few present themselves who are not tubercular: relatives of patients who are, or persons with acute colds, sometimes persons who are sick with other ailments come in for examination. Every diagnosis, for or against tuberculosis, must be concurred in by

two physicians. A sample of sputa is taken and sent to the department laboratories for examination. If syphilis or gonorrhea is suspected the patient reports Wednesday night for the Wassermann blood test or to have a smear taken. Many cases are referred to the X-ray Department at Willard Parker Hospital to have the chest photographed.

Various tonics, cough mixtures, laxatives and other medicines are prescribed and furnished by the clinics. The formulæ are all printed in a little book, and each one bears a number. These prescriptions all prepared and labelled with directions are kept in stock. Prescriptions are made by number so that the patient does not know what combination of drugs he is getting.

Whenever sanatorium or hospital care is indicated the patient is so recommended.

Each physician is required to serve eight hours a week, six in the clinic and two outside making calls. There is no provision for physicians' care in the homes. The calls are made to look up patients who have stopped coming to the clinic, or to see patients who have become suddenly sick enough to stay in bed, or to look up complaints. For example:

During twelve months I made sixty-seven outside calls. Of these seventeen were so sick that they were sent to hospitals—several had pneumonia. Three were directed to report back to the clinic and were later referred to sanatoria. Seventeen evidently had not been very sick and were at work every day. Most of these were directed to report back to the clinic for final examination to have their names taken from the list. Nine reported that they had their own private physicians. Two men, desperately ill, with families and wretchedly poor, after moral suasion had failed were definitely committed and forcibly removed to North Brothers Island for the good of themselves and their families. Five had become very ill and died within twenty-four hours of my visit, two of them died of pneumonia. Six came back to the clinic as regular attendants. Three had moved away and were not found. Five, because they coughed, had had anonymous complaints sent in against them and the cases had to be investigated.

The tuberculosis clinics are well established and are doing a very useful and valuable work. I believe the work to be of value to the patients, more so to their families because all members of families of patients are examined as a routine. In

that way early cases are frequently detected, and the patients referred to sanatoria while there is a probability of a cure. The sick patients are sent to tuberculosis hospitals. Material assistance in other ways is often given to the families while the bread winner has a chance to rest up and is relieved of financial worry to a certain extent.

The community is benefited because the sick are cared for and the well are protected.

Patients come to the tuberculosis clinics in the same way that they seek medical treatment elsewhere, because either they themselves or their families think they need attention. Some of them continue at their work—not many. Others are referred to sanatoria, day camps, or hospitals for the special care of tuberculosis. Cases so referred have their credentials pass through the Hospital Admission Bureau for Tuberculosis. This was established some seven or eight years ago and until this year was under the joint administration of the Department of Health and Department of Public Charities. It is now under sole control of the Department of Public Charities. The social service bureau looks up applicants to find out if they are proper patients for city care. If so, the name goes on a waiting list, and when a vacancy occurs, if found suitable physically also, the patient is sent to the institution of choice.

A VOLUNTEER MEDICAL SERVICE CORPS.

BY

IRA S. WILE.

IN order to complete the mobilization of the medical and surgical resources of the country the Council of National Defense has authorized and directed the organization of a Volunteer Medical Service Corps. It has been recognized that many physicians possess slight infirmities or are beyond the age limit—55 years—permitting active medical service, but are nevertheless capable of assisting the Government in numerous ways for public and institutional service. The patriotism of the profession seeks for methods of expression, and an opportunity is thus afforded for all reputable physicians and surgeons who are ineligible for membership in the regular officers' reserve corps.

It is intended that this new corps shall be a mobile squadron capable of being diverted to meet such civil and military needs as are not already provided for. Its functions in general will be to assist in the maintenance of the health of the people at home with as great, if not greater, efficiency than that existent during peace times. While thousands of physicians are devoting themselves to the satisfaction of the demands of field and hospital service for military forces, the members of the Volunteer Medical Service Corps will give their time to hospitals, medical teaching, laboratory work, the examination of drafted soldiers, the reclamation of those rejected because of comparatively slight physical defects, conserving the health of the families and dependents of enlisted men, and the preservation of sanitary conditions throughout the country. The very strains upon the medical talent of the country arising from the depleted medical forces remaining for civil life accentuate the necessity for an organization of the character indicated.

The principal measures of service will be gratuitous, but the service will be rendered only in response to a request of the Surgeon General of the Army, the Navy, or the Public Health Service or the head of some other duly authorized department or association charged with responsibility for the welfare of civil communities.

While lives are being offered freely, there is no reason to believe that there will be any hesitancy on the part of physicians to enroll themselves for the giving of their time, thought and energy in behalf of the public weal.

Any qualified practitioner, intending to join, shall apply by letter to the Secretary of the Central Governing Board, Dr. Wm. F. Snow, Washington, D. C., who will send the applicant a printed form, the filling out of which will permit ready classification according to training and experience. The final acceptance to membership will be by the National governing body.—
From American Journal of Surgery.

DRUGLESS HEALERS IN THE ARMY MEDICAL DEPARTMENT.

THE Surgeon General of the Army is unalterably opposed to any legislation (such as has been suggested in certain quarters and such as members of Congress are being importuned to enact) permitting appointment of osteopaths and

other sects to the personnel of the Army Medical Department. He believes that there should be no departure from the fixed rules prescribing the qualifications for candidates for the medical service. In a memorandum on the subject recently submitted to the Adjutant General of the Army, Surgeon General Gorgas says: "The time has long passed for exclusive adherence to any particular school of medical doctrine or practice, such as is implied by the degree of doctor of osteopathy, of chiropractic, of naturopathy, or mechanotherapy, of electric medicine, or any other 'pathy.' The terms 'allopathy,' 'old school,' etc., are equally objectionable. A scientifically educated physician is at liberty, and it is his duty, to employ any method of treatment whatever which he believes will benefit his patient. Homoeopathic physicians have the degree of doctor of medicine and some of their schools furnish an adequate medical education. They have for the most part abandoned their exclusive dogmas; as a class they are rapidly declining in numbers and are being merged in the general profession of medicine. They are eligible to qualify for the Medical Corps of the Army. While practice based upon the peculiar tenets of osteopathy may be beneficial in suitable cases, the same or similar methods are open to the use of any physician. Osteopathic procedure applied to cases unsuited for them, as often done, results in serious harm. The only safeguard against such adherence to exclusive systems is a good medical education, such as now is demanded for admission to the Medical Corps.

"It would be most objectionable to recognize any sort of medical practitioners in the Medical Department of the Army, be it osteopathic, allopathic, eclectic, chiropractic, or any other of the countless sects. Members of the regular profession of medicine, who now enter the Medical Corps, are merely educated physicians and do not constitute a sect in medicine, allopathic or otherwise. They are simply physicians free to follow any method of treatment which they may deem beneficial in the same sense that a chemist is a chemist and a physician is a physician.

**MEDICAL OFFICERS—A MESSAGE FROM SURGEON
GENERAL GORGAS.**

WAR DEPARTMENT, OFFICE OF THE SURGEON GENERAL.

WASHINGTON, April 8, 1918.

From: The Surgeon General.

To: Editor, *Journal of American Institute of Homocopathy*,
Marshall Field Building, Chicago, Ill.

Subject: Medical Reserve Corps.

1. I wish to call to the attention of the profession at large the urgent need of additional medical officers. As the war progresses the need for additional officers becomes each day more and more apparent. Although the medical profession of the country has responded as has no other profession, future response must be greater and greater. The Department has almost reached the limit of medical officers available for assignment.

2. I am, therefore, appealing to you to bring to the attention of the profession at large the necessity for additional volunteers. So far the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active, or the fighting phase, a phase which will make enormous demands upon the resources of the country. The conservation of these resources, especially that of man-power, depends entirely upon an adequate medical service. The morning papers publish a statement that by the end of the year a million and a half men will be in France. Fifteen thousand medical officers will be required for that army alone. There are to-day on active duty 15,174 officers of the Medical Reserve Corps.

3. Within the next two or three months the second draft will be made, to be followed by other drafts, each of which will require its proportionate number of medical officers. There are at this time on the available list of the Reserve Corps an insufficient number of officers to meet the demands of this draft.

4. I cannot emphasize too strongly the supreme demand for medical officers. Will you give the Department your assistance in obtaining these officers? It is not now a question of a few hundred medical men volunteering for service, but it is a question of the mobilization of the profession that in the large centers of population and at other convenient points as

well as at all Army camps and cantonments, boards of officers have been convened for the purpose of examining candidates for commission in the Medical Reserve Corps of the Army. An applicant for the Reserve should apply to the board nearest his home.

5. The requirements for commission in the Medical Reserve Corps are that the applicant be a male citizen of the United States, a graduate of reputable school of medicine authorized to confer the degree of M. D., between the ages of 22 and 55 years of age, and professionally, morally and physically qualified for service.

6. With deep appreciation of any service you may be able to render the Department, I am,

W. C. GORGAS,

Surgeon General, U. S. Army.

MEDICAL RESERVE CORPS—GORGAS.

WAR DEPARTMENT

OFFICE OF THE SURGEON GENERAL

WASHINGTON.

April 25, 1918.

From: The Surgeon General, U. S. Army.

To: The American Institute of Homœopathy, 22 East Washington Street, Chicago, Ill.

Subject: Medical Reserve Corps.

1. The Surgeon General of the Army desires the co-operation of the American Institute of Homœopathy in securing additional enlistments to the Medical Reserve Corps and for keeping the numerical strength of the Corps up to the requirements of the service.

2. This will necessitate a close co-operation between the office of the Surgeon General and the officials of the American Institute of Homœopathy through the different State and county medical societies and the different organizations of the American Institute of Homœopathy.

3. The present needs of the service will require all of the officers of the Medical Reserve Corps who have received their commissions and who are ready for active service. The additional increase of the army during the next few months will probably require the service of 5,000 physicians who as yet have not made application for commission in the Medical Reserve Corps.

4. Under the present authorization for the army, it is estimated that the Medical Reserve Corps will need a steady increase of about 2,500 applicants a year during the continuance of the war for the purpose of replacements due to casualties, resignations and discharges, and to provide a medical personnel for organizations not at this time authorized. Under the present arrangement the Surgeon General is authorized to maintain a strength of 3,600 medical officers in the training camps for medical officers for the purpose of instruction.

5. It is earnestly desired that the interests of the civil communities be conserved as far as possible and that no enlistment in the Medical Reserve Corps be made that would work serious hardship upon any community, manufacturing concern or other civil activity by taking from such community, manufacturing concern or other civil activity physicians whose services are needed for the efficient and competent care of the civil population or the employees of such concerns.

6. To this end the department desires the closest cooperation and assistance of the American Institute of Homœopathy and its officers and allied organizations, believing that through these organizations and other similar organizations the additional increment to the Medical Reserve Corps can be most satisfactorily obtained and the necessary increment for replacements be secured without in any way depriving any community of physicians whose services are necessary to its welfare, and without depriving any manufacturing or other concern of its medical personnel if such personnel cannot be spared.

7. It is believed that by working through the institute, similar organizations, subordinate bodies and State and county medical societies, the best possible results can be obtained and the needs of the service can be supplied with competent and efficient professional men to meet not only the present necessity of the service, but to supply its future needs in the way of officers for the Medical Reserve Corps.

8. In making this request of the American Institute of Homœopathy, I wish to say that many who have already volunteered their services have been members and followers of this school and that in the selection of medical officers there has been and will be no discrimination against such physicians.

WILLIAM C. GORGAS,
Surgeon General, U. S. Army.

LIST OF QUESTIONS SUBMITTED BY THE BUREAU OF MEDICAL
EDUCATION AND LICENSURE AT THE JANUARY, 1918,
EXAMINATIONS.

MEDICAL AND SURGICAL

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY

1. Describe the physiology of the kidney. State the organic changes in each of two forms of nephritis.
2. Name the investigations which would aid in diagnosing suspected tuberculosis. Give the technic by which the bacilli may be identified.
3. What laboratory investigations would be suggested by (a) blood in the urine; (b) convulsions during pregnancy; (c) frequent urination; (d) a lump in the breast; (e) an ulcerated lip?
4. Name the enzymes of the pancreas stating upon what kind of foodstuff each acts.
5. Describe the pathological process from the onset of infection to the stage of ankylosis in tuberculosis of the knee-joint.
6. Describe the pathological condition (a) in neuritis; (b) in otitis media; (c) in plastic iritis; (d) in diphtheria.
7. Give a general outline of two common serological tests, noting especially the principles involved.
8. Give critical directions for collecting the specimens in investigating the following conditions: (a) purulent conjunctivitis; (b) cerebrospinal meningitis; (c) tertiary syphilis; (d) thoracic empyema.
9. What injurious effects may follow an abnormality in the secretions of the thyroid gland?
10. Mention the varieties of immunity and give an example of each.

DIAGNOSIS, SYMPTOMATOLOGY, MEDICAL JURISPRUDENCE AND
TOXICOLOGY

1. Describe the symptoms and clinical appearance of chancroid and differentiate it from a true Hunterian chancre.
2. What is acute endocarditis? Give causes and symptoms and state briefly how it differs from malignant (ulcerative) endocarditis.
3. Describe in detail the symptoms of acute appendicitis;

name and differentiate three conditions in the female which may be mistaken for it.

4. Describe the symptoms of pleurisy with and without effusion and differentiate it from lobar pneumonia.

5. Describe the symptoms of diabetes mellitus and differentiate it from chronic interstitial nephritis both clinically and chemically.

6. Describe the symptoms of gonorrheal arthritis; name two other conditions with which it may be confused and differentiate them.

7. Describe the symptoms of measles and differentiate its skin lesion from that of syphilis.

8. Contrast the poisonous symptoms of belladonna with those of hyoscyamus, aconite and digitalis.

9. What are the common modes (including trade processes) in which lead poisoning is brought about? Enumerate the toxic symptoms of same.

10. A dead body is found in a remote place: name four possible causes of the death, telling how you would substantiate your opinion in each case before a court of justice.

OBSTETRICS AND GYNECOLOGY—PHYSIOLOGICAL CHEMISTRY

1. Discuss the prenatal care of a pregnant woman.

2. What symptoms and conditions would lead you to apprehend an attack of eclampsia?

3. Discuss the symptoms of the menopause, bringing out the cardinal points.

4. Given a woman in labor who suddenly develops the symptoms of collapse, discuss the possible causes.

5. Discuss the mechanism of normal labor, bringing into contrast the mechanism of two deviations from the normal.

6. Discuss the immediate care of the child at birth.

7. Discuss the significance of abnormal bleeding from the vaginal canal: (a) in the nonpregnant woman, (b) in the pregnant woman.

9. Outline the principles involved in the quantitative examination of stomach contents (gastric juice).

10. (a) How would you calculate the calories of energy (heat value) which would be yielded by a diet containing 100 gm. of protein, 500 gm. of carbohydrate, 50 gm. of fat? (b) How would you determine experimentally the energy value of a substance such, for example, as *bread* or *feces*?

ANATOMY AND SURGERY

1. Given a severe scalp wound, upon what would you base your opinion as to the safety of immediate suturing?
2. Describe the immediate and later treatment of severe injury by freezing of the feet. What blood vessels may be involved in such injury?
3. For what purposes may cystoscopy be employed? Give the technic of cystoscopy of the male urinary bladder.
4. What are the varieties of fracture of the skull? State indications for surgical intervention.
5. Name the varieties, give causes and treatment of fistula in ano.
6. State (a) the possible causes, (b) the symptoms, (c) the treatment of extravasation of urine.
7. State the stages and symptoms of hip-joint disease. Outline a character of treatment that may be appropriate to each stage.
8. If called to give attention to a man having a severe gunshot wound of the leg, state what would be your treatment and arrangements for his transportation. (Assume that all of your available physical equipment was carried in a small hand bag and that the patient had to be transported to a considerable distance.)
9. Enumerate the variety of fractures that may occur about the elbow joint. State what nerves may be injured. Outline the treatment of any one form of fracture about the elbow joint, giving the mechanical reasons for selecting the type of splint indicated.
10. What structures may be injured by a dislocation of the shoulder joint, or by a rough manipulation in its reduction? State the bony landmarks of the shoulder joint.

PRACTICE—MATERIA MEDICA AND THERAPEUTICS—HYGIENE
AND PREVENTIVE MEDICINE

1. Outline the general therapeutic effects of (a) *antimonii et potassii tartras*, (b) *ippecacuanha*, (c) *sodii nitris*, (d) *acidum tannicum*, (e) *pilocarpinæ hydrochloridum*.
2. What remedies would you employ in the treatment (a) of typhoid fever carriers and (b) of diphtheria carriers? What sanitary and preventive measures would you employ?
3. Describe the general management of a case of sciatica and state the reasons for each drug used.
4. Describe briefly the treatment (a) of tetanus and (b) of infantile paralysis.

5. Name five drugs that may be advantageously administered hypodermatically. Give dose and rationale of administration for each.

6. Outline the medicinal treatment of an acute attack of laryngitis and of a possible subsequent bronchitis.

7. Given a case of chronic auto-intoxication with a functional inadequacy of the skin and kidneys, state what remedies and other measures might be employed and with what object in view.

8. Write three prescriptions, unabbreviated, in the metric system: (a) one, in liquid form, for asthma; (b) one, in pill form, for chronic constipation; and (c) one for local application in eczema of the eyelids.

9. Outline in detail the general management of a case of smallpox.

10. Describe the sanitary, dietetic and medicinal treatment of a case of acute gastro-enteritis in an infant one year of age.

CHIROPODY

ANATOMY AND PHYSIOLOGY

1. Discuss the function of the skin and nails.
2. Discuss the function of the kidneys.
3. Discuss the regulation of body temperature.
4. Discuss assimilation and elimination, citing examples of each.
5. Give a general outline of the nervous system.
6. Discuss the circulation of the blood in the foot.
7. Describe the structure of the arches of the foot.
8. Discuss the development and growth of the skin and the nails.
9. Give a general outline of the nerve supply to the foot.
10. How are joints classified and give an example of each?

PRACTICE, HYGIENE AND PATHOLOGY

1. Describe the production of flat foot and its treatment.
2. Outline the directions you would give a patient in the routine care of his or her feet.
3. Name and describe five conditions of the feet requiring special care.
4. Name three antiseptics, their strength for use, and an

example of the conditions in which each might be used in chiropody.

5. Outline your treatment for soft corn.
6. What particular points should be observed in caring for the nails?
7. Describe the formation of a bunion and outline its treatment.
8. Outline your treatment for frosted feet. How would you diagnose such a condition?
9. Explain the process through which paring a corn may be the cause of death.
10. Name five abnormalities which may result from ill-fitting shoes.

DRUGLESS THERAPY

ANATOMY AND PHYSIOLOGY

1. Discuss the vasomotor nervous system and its normal mode of action.
2. Name the functions of the liver.
3. Discuss heat formation and heat regulation in man.
4. Give three functions of the spinal cord.
5. Name the tracts of the cord which carry cutaneous sensations (pain, temperature, tactile discrimination and tactile localization).
6. Give the gross and minute anatomy of the kidney.
7. Name the muscles and ligaments that support the longitudinal arch of the foot.
8. Describe the origin, course and termination of the neurons entering into the formation of the dorsal columns of the spinal cord.
9. Describe the boundaries of the obturator foramen and state the structures transmitted through the obturator canal.
10. Name the muscles which move the eyeball and give their nerve supply.

SYMPTOMATOLOGY—DIAGNOSIS—HYGIENE PRACTICE

1. Give the essential points of difference between malignant and benign tumors.
2. Enumerate the early symptoms of malignancy of the breast and of the uterus. (Late symptoms will not be accepted.)

3. State the significance of (a) blood in the urine, (b) blood in the stools.
4. How and through what mechanism does the manipulation of the skin affect the circulation?
5. Give in detail the physiological effects of heat and cold on the circulation of man.
6. A fracture of the upper dorsal region with pressure on the cord would produce what symptom?
7. Differentiate chronic constipation from bowel obstruction.
8. Differentiate acute rheumatism of the ankle from a sprain.
9. Discuss the diagnostic symptoms of tubercular disease of the hip joint.
10. State the significance of the various bleedings coming through the mouth. Differentiate three varieties.

PATHOLOGY

1. What systematic study of pathology have you made? What laboratory work have you learned to perform?
2. Outline the things sought for in a complete urinalysis.
3. What serious effects may be produced by enlarged tonsils and adenoids?
4. Describe the pathological condition in the lungs when affected by pneumonia in its various stages.
5. Describe the method of repair in a fractured bone.
6. Describe the spinal lesion (a) in infantile paralysis, (b) in locomotor ataxia.
7. What laboratory investigations would you advise (a) in purulent conjunctivitis; (b) in sore throat?
8. What are the lesions of syphilis in each of the three stages?
9. Explain how a diseased condition of each of the following organs may cause shortness of breath: heart, kidneys, pleura, lungs.
10. What is the morbid condition in neuritis; in paralysis; in rickets; in jaundice?

MASSAGE AND ALLIED BRANCHES

ANATOMY AND PHYSIOLOGY

1. Name the muscles which enter into the formation of the tendon Achilles.

2. Trace an afferent impulse from the little finger to the spinal cord.
3. Enumerate in order the parts of the small intestines, and name the portion of the large intestine which connects with the small intestine.
4. Give a general outline of the nervous system.
5. Where and by what is starchy food digested?
6. Name the largest tarsal bone and state which tendon inserts into this bone.
7. Where is bile secreted and what is its office in the digestive tract?
8. By what arteries is the heart muscle supplied with nutritive blood?
9. Define voluntary and involuntary muscle and give an example of each.
10. Name three varieties of joints and give an example of each.

PRACTICE, HYGIENE AND PATHOLOGY

1. What are some of the causes of varicose veins? How would you treat them?
2. How would your treatment vary in nervous excitation from that of nervous depression?
3. Outline your treatment for insomnia?
State some hygienic precautions that are important in your office practice.
5. Outline the early and late treatment of a sprained ankle.
6. Give causes for baldness and outline treatment for the same.
7. In what conditions are hot packs or sitz baths indicated?
8. What treatment would you apply (a) in high blood pressure; (b) in fainting?
9. Under what conditions may abdominal manipulations (a) be helpful; (b) be harmful?
10. What is the effect of massage (a) on the skin; (b) on the muscles?

EDITORIAL

FINANCES.

IN order that the Pennsylvania State Homeopathic Medical Society shall be in a position to properly do a lot of constructive work in the way of organization, homeopathic publicity, and legal protection at Harrisburg, it is absolutely necessary that the members pay their dues promptly. The lists of the Treasurer show a larger number this year than usual who are not paid up, and many who are three years or more in arrears. We are convinced that this is entirely due to carelessness, an oversight, but dues have an unpleasant way of piling up, when it is still harder to pay. This year there are many members in active military service, who are exempted from their dues; so much the more reason for those at home to pay promptly, to carry the burden. We owe it to ourselves, to our loyalty to Homeopathy, and to the State Society, as a support to its officers and committees who do the work from which every member reaps the benefits.

In addition, the Post Office regulations demand a definite report each year on paid-up subscribers to the Hahnemannian Monthly, which journal is sent to each member of the State Society; and the State Society cannot pay for the Monthly unless your dues are paid.

The past winter was a good season for all doctors; you are in a financial position to pay at once on receipt of your account from Dr. Goff, the Treasurer. Why not do so?

W. M. H.

MEDICAL EDUCATION AND THE WAR.

AT the end of this, the first year of our entrance into the war, the Nation and the medical profession find themselves face to face with a serious crisis because of the lack of an adequate number of physicians to care for the needs of the civil and military population. During the past few years the State Boards of Medical Education have been piling up requirement after requirement upon the candidate for a medical

degree until, in conjunction with the Association of American Medical Colleges, they arrived at the point where, after January 1st, 1918, seven years of study are required after a man leaves the high school before he can secure a license to practice.

The prescribed course is laid out as follows:

Two years of premedical study—in languages, biology and other sciences; four years in the medical school, and one year in an approved hospital.

The idea in the minds of the professional educators who devised this course of medical study was most commendable and if the practical results were half as satisfactory as we had been promised, there would be little reason for complaint. Even in times of peace, however, it was rapidly becoming evident that this long and expensive course of study was impractical and was not producing the results that had been looked for. The disadvantages of this plan when put in operation can be briefly summarized as follows:

First. It involves such an expenditure of time and money as makes it very difficult for men in average circumstances to secure a medical degree. It may be conservatively stated that the cost of the course to the student involves an outlay in money of about seven hundred dollars per year. In addition to this it entailed a loss of earning capacity for seven years, during which time a man of average ability could earn about \$1,000 a year. The total cost to the student from the time he obtained his degree, therefore is about \$1,200. After this large expenditure of time and money, he has no assurance whatever that he will be able to earn a living and can be reasonably certain in the average case, that his earnings will be much less than what would have been the case had he taken up some business or trade immediately on leaving high school.

There are those who argue that despite this expense there are men whose families are in opulent circumstances that can well support such a course, but experience has demonstrated that ordinarily the sons of the wealthy are not disposed to enter into such an arduous profession in any large number.

Secondly. The difficulties placed in the way of a man obtaining a medical degree, has led to a uniform increase in the number of poorly trained practitioners commonly known as "drugless healers." Some twenty or thirty "schools" of drugless healers have sprung up in Pennsylvania during the last four or five years and practitioners of these various

systems can now be found in almost every portion of our Commonwealth.

The report of the State Board of Medical Education in Illinois shows that over fifteen hundred of these practitioners have been licensed to practice in Illinois in the last few years. We are informed on the very best authority that in Los Angeles, these drugless healers outnumber educated physicians by four to one.

It was recently stated in one of our reputable medical journals that about twenty-seven million people in the United States are today under the care of these "healers."

These facts prove conclusively that the present legal requirements have not raised the standard of those practising upon the sick, as the vast majority of those so-called "drugless healers" have no education that is worthy of any consideration from a scientific standpoint. It is likely that many practitioners of these cults would have entered upon the study of medicine in a reputable college had they not been deterred by the very large expense that such a course entails. It is hard indeed to induce a man to spend seven years in a medical school when he can take a course of a few months in one of the systems of drugless healing and in a year or two be earning more money than the average physician.

A manifest failure, therefore, in times of peace, in the great crisis in our national history arising out of our entrance into the war, *the present system of education has become nothing short of a national calamity.* We cannot win the war without ships, ammunition and DOCTORS. It is a deplorable fact that despite the strenuous efforts that are being made to increase the production of ammunition and ships, the State Medical Boards and the Association of American Medical Colleges, are striving with all their power to retain impractical requirements that keep down the production of medical men and are thus willingly or unwillingly placing a hardship upon our military organizations and our civil communities. It is true, that it may be a year or more before the most serious effect of this policy will be felt; but gradually the profession as well as the public are beginning to understand the seriousness of the situation.

When the United States entered into the war there were in this country about ninety thousand doctors under the age of fifty-six years of age and capable of active practice in

military or civil life. About twenty thousand of these men have already gone into military service. At the present time the Surgeon Generals of the Army and Navy are calling for six thousand more doctors. If the size of the army is to be increased from the present number to five million, as seems to be very probable, many thousand more physicians will be required. The entire number of graduates from all the medical schools of our country is approximately three thousand per year, and the Surgeon-General informs us that all of these men who are physically fit, estimated at about twenty-five hundred a year, will be required for replacements of those who are now in the service and practically none of these men will be available for civil practice. Despite all of these facts, those who are in a position to formulate our system of medical education insist that there is *no scarcity of doctors and that there is "no need to worry."* Their attitude is identical with that of the very learned gentleman who officially assured us last September that there was no shortage of coal and that the public need not worry. When winter came this gentleman made arduous efforts to secure for the people what he had promised them; but unfortunately his activities were instituted too late and throughout the country shops and factories were closed and people huddled together around wood fires and gas stoves in order to escape freezing. Are we going to have a repetition of this fiasco in the sphere of medical education? We certainly will have unless the profession and the public raise such a strong protest at once that the Association of American Medical Colleges and the Federation of State Medical Boards are forcibly reminded that the purpose of medical laws is to protect the public and not to stifle professional competition and that the people of this country expect the medical schools to fulfill their duty and to provide the country with an adequate number of competent doctors.

The Homoeopathic Medical Society of the County of Philadelphia, realizing the seriousness of this problem and the necessity of taking immediate action, has passed resolutions condemning the present system of medical education as impractical and deleterious to the interests of our nation and has appointed a committee who have formulated the following plan of shortening our system of medical education in such a way as will enable us to educate an adequate number of competent physicians and at the same time furnish them with a

medical training that is fully equivalent, in every practical way, to that which they are now receiving. This plan has been submitted to Surgeon General, United States Army, and it may be briefly outlined as follows:

First. Accept students in the medical course directly from approved high schools. This would reduce the seven years course to five years without any sacrifice of efficiency on the part of the graduates.

Second. Recognize a year's work in a military hospital as equivalent to a year in a civil hospital. This would reduce the course to four years.

Third. If, in the judgment of the Department, extreme necessity for doctors exists, the medical colleges might be run throughout the summer months and the standard four years course be given in three years. This is the least practical of all these suggestions, as if this step alone were carried out its only effect would be to reduce the length of the medical course in many states from seven years to six; a reduction in time that is insignificant in view of the inconvenience and hardships entailed upon the colleges and students.

The committee representing the Homeopathic Medical Society of the County of Philadelphia, would like to urge upon every homeopathic physician in this State to write *at once*, as a matter of patriotic duty, to Lieutenant-Colonel H. D. Arnold, care of the Surgeon-General's Office, Washington, D. C., endorsing the plan of shortening medical education in the manner above referred to.

G. H. W.

GLEANINGS

PROBLEMS OF CARDIOVASCULAR DISEASE.—Dr. Edward E. Cornwall, of Brooklyn, called attention to the fact that the central pumping system, the heart and the arteries, was frequently subjected to wear and tear. If one considered this system as a whole it was not necessary to speak of arteriosclerosis, or chronic nephritis, or myocardial disease; these were merely manifestations and could not be considered as separate clinical entities. The damage which the vascular system frequently sustained as a whole presented many problems, but the discussion on this occasion might be confined to two phases, heredity and prophylaxis. Prophylaxis in cardiovascular disease deserved more attention than it generally received at the hands of the profession. It was a well known fact that cardiovascular disease was as important in the latter half of life as bacterial disease was in the early half, and there was no doubt that the loss was greater by the premature shortening of useful activities through such disease. In the etiology heredity played a prominent part, the quality of the vascular apparatus being inherited in the same way that a constitutional susceptibility to tuberculosis might be said to be hereditary. An inherited metabolic insufficiency was frequently the pathological cause predisposing to cardiovascular disease, such factors in the family history as apoplexy, diabetes, arthritis, heart disease, chronic headaches, and obesity often being noted in patients whose vascular apparatus showed early signs of stress and strain. The consequences of such heredity could often be lessened by the mode of life. Either physical or mental overwork was one determining factor in producing early degeneration of the cardiovascular system. The nervous strain of modern life with late hours and excitement was apt to cause chronic arterial overpressure. There was an immense amount of work to be done by the metabolism in transforming material from outside the body into suitable elements for its nutrition and also in the arrangement for the elimination of waste products. Infectious diseases were a severe burden on the system and their toxins often permanently damaged the circulatory apparatus. Chronic poisoning was often caused by alcohol, caffeine, and tobacco.

In treatment, two factors were prominent, an easy life and an easy diet. The first was selfexplanatory, but the latter was not dismissed so easily. The diet must be adapted to the habit of life and must reduce the work of the organism to a minimum. Quantitative was as important as qualitative regulation. The food should be chosen with a scientific attention to detail as justified by the serious condition of the patient. The ideal proteins were animal flesh, eggs, and milk, in terms of aminoacids. The symptoms of arteriosclerosis should be considered as nature's efforts to counterbalance existing damage. Sometimes Nature overdid her efforts at compensation; only where pressure was high, however, to injure the system was treatment by artificial dilators indicated. All other efforts should be directed toward removing the conditions which made treatment

necessary and the most important constituent of this treatment was suitable protein diet.—*New York Medical Journal*.

A NEW HYPOTHESIS CONCERNING TRAUMATIC SHOCK.—When Crile propounded his theory of surgical shock it was accepted at once. It explained the phenomena observed satisfactorily, and it was presented convincingly. War is the great iconoclast. Accepted views give way, new laws are discovered, and theory and practice are overturned. Now comes Dr. William Townsend Porter, the physiologist, with a new, a simple, and a still more satisfactory theory of surgical shock which promises to dispose of Crile's theory as effectively as did Crile's theory of those hitherto accepted.

Was it possible, asked Doctor Porter, that the unprecedented violence of the bombardments of the present war predisposed the wounded to surgical shock? If so, the characteristic lowering of the blood pressure would occur very soon after the wound was received. To study this phase of the question the Rockefeller Institute sent Doctor Porter to the front line trenches in France, where he could see many severely wounded and measured their blood pressure immediately. He found there was no predisposition toward surgical shock produced by life in the trenches.

His first visit to France taught Doctor Porter that shock was most frequent in patients with a fracture of the femur and those with multiple wounds through fatty tissue. Laboratory studies seemed to prove that it was the presence of fats absorbed into the circulation that caused traumatic shock by producing fatty embolism in the smaller capillaries. If the circulation could be stimulated, these embolisms might be overcome and the blood made to flow back into the heart, where it was needed, from the veins in which it was damned up by the globules of fat. He accomplished this by increasing the force and frequency of the respiration, stimulating the "respiratory pump." This he did by substituting carbon dioxide for a portion of the air inhaled by the patient. The labored breathing thus induced in most cases sufficed to overcome the impediment to the circulation, the blood flowed back from the veins into the heart, and the patient recovered from the shock.—*New York Medical Journal*.

A PROHIBITORY TAX.—At the last moment before its passage, an amendment was introduced into the war revenue bill, which provided for the establishment of a zone rate of postage on periodical publications. This was passed over the unanimous and urgent protests of all the publishers. If it is allowed to remain a part of the law, it will become necessary for the publishers of periodicals of national circulation to make varying rates of subscription for their journals in accordance with the postage zones. The man who lives in Hawaii is an American citizen and should receive his mail at exactly the same postage rates as the man who lives in the District of Columbia. The very essence of penny postage is to unify an entire country, to bring all the people closer together, to consolidate the sections into a whole. This principle has remained unchanged and all the postal systems of the world have been built upon it. The introduction of zone rates of postage for merchandise,

though apparently a novel and antagonistic feature, does not in fact bear upon the subject at all, for parcel post is really a misnomer, it is in fact a Government express service, and introduces a wholly new factor, the commercial package of goods as distinct from written or printed matter for which the penny post was really devised.

To apply a zone rate of postage to technical periodicals is to penalize the scientist who lives in the remoter sections. He is already sufficiently penalized in being shut off from personal contact with other men doing similar scientific work. But he can find some compensation for this and keep in touch with the scientific world through current periodicals. Now comes the iniquitous zone system of periodical postage, to further penalize him for living outside the publishing centres. Every doctor will be seriously affected by this zone rate of postage. He can and should make himself heard on this subject; he should support every effort to maintain the integrity of the intercommunication of scientific thought. He should make it his business to write at once to the members of Congress and Senators from his section urging the prompt repeal of this ill considered legislation.—*New York Medical Journal*.

LUES AND THE WAR.—In a remarkable article in the *New York Medical Journal* of April 6, 1918, William P. Cunningham, M. D., of New York, first refutes the impression abroad in the land today that syphilis is conquered and that salvarsan has achieved the miracle. The evidence of the Wassermann reaction is not always decisive, while the positive reactions are indefeasible, unfortunately the negative are not. It is conceded that the cerebral and spinal cells may be attacked with a clean report from the blood. No one can assert that syphilis is "cured," while a man is liable to tabes or paresis. The real horror of syphilis lies not in its disfiguring manifestations, nor even in its arterial degenerations, nor even in its depravation of the special senses, but in the devitalization of the functioning tissue of the brain and spinal cord. The living death of paresis, the helpless, hopeless, harassed life of tabes are the consequences that impress the Scriptural admonition that "the wages of sin is death." And it is just these consequences, end results of lues, that salvarsan medication cannot promise to avert. With tabes and paresis in doubt, the warning against syphilis retains its terrible gravity. No one who contracts the disease is safe from these horrifying sequelae. Every syphilitic is a potential tabetic, a potential parietic.

Men and boys have been improperly instructed, they have been given to understand by materialistic teachers that the satisfaction of their sexual desires is a necessary, and, therefore, a permissible and commendable safeguard of their health. Other phases of the subject were not emphasized. Resistance to sexual impulse has been wrongly credited with tremendous nervous casualties.

Much ado has been raised about the awful conflagration of immorality raging among the enlisted men abroad. General Pershing's recent report regarding the health of the men in France refutes this, for there where the restraints ought to be the weakest, he declares that sexual disease of recent development is gratifyingly scarce, attributing this to

the advice given the men by their officers to keep in the best of health to increase their efficiency for military duty. These soldiers are actuated in maintaining their health by the solemnity of their mission, the uncertainty of their future, the sacrifices at home. Self-restraint is, therefore, possible and is preventive of syphilis. But restraint under the exaltation of a great devotion is one thing and restraint in the ordinary course of events quite another. However, curable syphilis would inspire very little fear, and the removal of that fear would be a grave menace to the integrity of the race. The author then urges teachers and parents to rouse in the young males a repulsion to illicit sex relations on the basis of fear of physical results.

SHOCK.—This, one of the major problems of war, has been subject to an intensive study upon the part of clinicians and laboratory men. Although it is probably true that no revolutionizing treatment has been discovered, there has been a certain formulation of methods long since recognized as of wide application, and a rejection of drugs regarded as distinctly hurtful by surgeons who have given the matter careful study. Thus in all the contributions it is noteworthy and most gratifying to find an active absence of combinations of strychnine, camphor oil, atropine, or other alkaloids, and a general agreement as to the value of morphine when shock is attended by severe pain or great restlessness without dyspnea. There is universal agreement as to the beneficial effects of rest, quiet, external heat, and head in low position; a not unanimous verdict as to the value of normal salt solution, Ringer's solution, hypertonic salt solution, and bicarbonate of soda; one or two voices strongly raised in favor of rebreathing, forceful breathing, and CO₂; a universal recognition of the value of transfusion as a means of raising and maintaining blood-pressure at the increased level.

It is interesting to note that in the report of the Special Investigating Committee appointed by the Medical Research Committee of Great Britain in August, 1917, to undertake the co-ordination of inquiries into surgical shock and allied conditions, with a view to a better correlation of the laboratory and clinical observations (*Journal of the American Medical Association*, Feb. 23, 1918), Fraser and Cowell have devoted themselves for over two years to the reading and recording of blood-pressure in a variety of wound conditions. They report satisfactory results from the intravenous use of hypertonic solution, consisting of sodium chloride 2 grammes, potassium chloride 0.05 grammes, calcium chloride 0.05 gramme, and water 100 Cc.

They have also secured pressure which was maintained by the injection of calcium chloride 0.075 gramme; sodium chloride 1.325 grammes; gum acacia, 2 grammes; water, 100 Cc.

Fraser and Cowell have changed this slightly, giving less sodium chloride and more calcium chloride and leaving out the potassium salt entirely. They record good results from the use of 15 to 20 or even 30 ounces of the solution given intravenously. The solution was given slowly, at the rate of 5 ounces in five minutes, and its heat maintained at a temperature of about 120 degrees F. in the reservoir. It was repeated if necessary in twelve to twenty-four hours.

Direct blood transfusion, as could be expected, caused an immediate and persistent rise of pressure. As to heart drugs, such as pituitary solution, epinephrin, caffeine, camphor, etc., the authors state there is not sufficient evidence to show that one of these drugs takes precedence over the others. They conclude their paper by commending direct blood and calcium hypertonic gum solution injections. Physiological sodium chloride solution is regarded as unsatisfactory. They also hold that the observation of pressure during the first weeks of convalescence affords an excellent index as to the prognosis, steady rising or maintaining of high pressure being of course favorable.

Cannon, Fraser and Hooper have particularly studied the alterations in the distribution and character of blood in shock and hemorrhage. They regard a high capillary red count as the first noteworthy characteristic, particularly noteworthy since hemorrhage so often complicates the war cases. A 7 per cent. solution of gum acacia in sodium chloride solution as advocated by Bayliss raised the blood-pressure in shock, but lowered both the blood count and the hemoglobin, as might be expected. Hypertonic saline injections distinctly rapidly lowered the high count of the capillary blood. Coincident with this there was a drop in the hemoglobin. The authors regard the continued concentration of the peripheral blood as of evil prognostic note, as is also a continued dilution of the blood beyond the fourth or fifth day after injury.

Cannon contributes a valuable paper upon the occurrence of acidosis in shock, hemorrhage, and gas infection. All these cases have a diminished supply of available alkali in the blood; the lower the pressure the more marked the acidosis. The pulse is rapid, but does not vary with the degree of acidosis. The respiratory rate becomes more rapid as the acidosis increases, until shortly before death a true air-hunger may prevail. This acidosis is not due to lack of circulating carbohydrate. It should be noted that operation on men suffering from shock and acidosis results in serious and rapid sinking of arterial pressure when it is already low, and in marked and sudden decrease of the alkali reserve of the blood when that reserve likewise is already low. This change may not occur if nitrous-oxide-oxygen anesthesia, instead of ether, is employed, but that antiseptic affords no guarantee against the ominous decline.

Cannon states that shocked men suffering after operation from extreme acidosis with "air-hunger" can be quickly relieved of their distress by intravenous injection of solution of bicarbonate, and their blood-pressure restored to normal.—*Editorial, Therapeutic Gazette.*

TREATMENT OF PLEURITIS AND EMPYEMA.—G. P. La Roque (*Virginia Medical Semi-Monthly*, January, 1918), referring to pleuritis after pneumonia, recommends watchful waiting for proper encapsulation of the pleural exudate until accessible to needle puncture exploration, as a safer procedure than exploratory thoracotomy across a non-suppurating pleural area, with its 50 per cent. mortality, rest in bed, opiates to secure rest of breathing, local applications, plenty of fresh air and sunshine, and self-restraint on the part of the surgeon will practically always lead to walling off of pus, after which puncture can be performed within an area three inches in diameter, with its centre at the

seventh interspace just behind the axillary line. In aspirating, a large needle attached to a large record syringe, provided with a double stopcock for withdrawing and expelling the fluid, may be appropriately employed. In young children, unless the pus is thick and yellow, this is frequently all that is necessary. In adults and others, when the pus is thick, La Roque commonly irrigates through the needle, injecting and evacuating saline solution with the aid of the double stopcock until the fluid returns clear. In the presence of very thick pus he plunges a gallbladder trocar through the interspace, and irrigates with saline solution or a weak solution of iodine. In such cases, a linear incision through the interspace under local anesthesia will permit of introduction of two small calibre rubber tubes, pinned together and sutured to the skin. In from one to three weeks the drainage has ceased and the incision healed. By this treatment he has obtained 90 per cent. of cures without sinus formation, and had no mortality due to the disease. He deems rib resection unnecessary as well as unsafe, conducive to sinus formation, and a hindrance to healing. In an occasional case the necessity may arise for intercostal incision and rib spreading according to the technic of Lilienthal as a second operation.

PNEUMONIA AT A BASE HOSPITAL.—Rufus Cole and W. G. MacCallum (*Journal A. M. A.*, April 20, 1918) studied a considerable number of cases of pneumonia, both clinically and pathologically and found that there were two very distinct types of the disease. The one was the usual lobar pneumonia, similar to the disease as encountered in civil life, and was of low mortality. The other was a lobular or bronchopneumonia which occurred as a complication or sequel of measles, was of very high mortality, and was due to infection with a hemolytic streptococcus. In every case of this type of pneumonia examined post mortem this streptococcus was isolated, usually in pure culture, from the heart's blood, the lung lesions, pleural exudate, or other tissues. In many of the cases the same organism was present during life in the sputum and in a few also in the blood. The clinical picture of this form of pneumonia began with cough, fever, slight respiratory distress, and muco-purulent sputum. Sometimes there was an interval between the fall of the fever due to the measles and at others there was none. In all cases the onset of the pneumonia was gradual. The symptoms of the developed disease were moderate fever, seldom above 104 degrees F. and often irregular, especially when empyema was present; moderate acceleration of the pulse; and characteristic respiratory distress. The respiratory interference appeared to involve inspiration so that there was marked use of the accessory muscles and evident conscious effort. The rate was not very rapid. Cyanosis of marked degree was always present, even in the early stages. Cough was troublesome and accompanied by sputum which varied in different cases, but never was like that of lobar pneumonia. Restlessness and pain in the chest were also common. The physical signs, like those typical of bronchopneumonia in general, were not very distinctive. The commonest complication was empyema, which proved very fatal. Investigation showed that the infection with the streptococcus was apparently acquired by the measles patients during their stay in the hospital as the organism was

relatively infrequent in the throats of the patients at the time of their admission and in the throats of their camp associates.

SEQUEL TO MEASLES.—In each instance seen by Vroom the early course of the attack of measles was uneventful, pursuing the classical course with headache, rise of temperature, cough, conjunctivitis, and measles eruption over the face and body. On the sixth or seventh day from the advent of the eruption, the patient suddenly developed a sore throat in the nature of an acute pharyngitis; red, engorged and painful, a marked aphonia, a sharp rise in temperature to 103 to 104 F., and pronounced epistaxis. Large, moist bronchial rales in both lungs became evident early, accompanied with very acute pleuritic pain, usually in one side. In those cases that eventually pursued a severe or fatal course, fine crepitant rales became evident on about the second day, followed with an effusion into one or both pleural cavities; at first serous in character, but with a tendency rapidly to become purulent. Percussion gave no evidence of pulmonary consolidation, nor did postmortem findings reveal such. Expectoration from the first profuse yellow, glairy, with not the tenacity of that of lobar pneumonia; it was very markedly streaked with bright blood, and was not blood stained. In those severely ill, the expectoration became scanty and rather frothy in character, on the third or fourth day, and the fine crepitant rales remained pronounced. Cyanosis was a symptom appearing on the second day after the sudden rise in temperature. The patients complained of a tightness across the chest and would allow themselves to be moved in bed only under protest. The lips became indented and covered with brown crusts. The pulse respiration ratio was 1 to 3. The blood pressure registered 90 to 95 systolic, and 60 to 75 diastolic. Pleural effusions occurred early, often on the second day. The cyanosis, often an early symptom, had every evidence of being a resulting carbon dioxide poisoning from the failure of the highly congested and inflamed pulmonary alveoli to functionate in exchanging carbon dioxide for oxygen. The patients who did not survive, generally died within the first week; those that lived, have passed through a slow and tedious convalescence, the fine crackling rales slowly disappearing and the cyanotic condition passing away. The aphonia has been quite persistent. The pathologic and bacterial findings have not been worked out sufficiently for presentation. The mortality occurring from these so-called bronchopneumonia cases was 27 per cent.

AFTER-EFFECTS OF GUNSHOT WOUNDS ON JOINTS.—At the Croydon War Hospital an examination under anesthesia is undertaken in every suitable case in which there is any undue interference with the function of a part or in which some movable obstruction exists and where the roentgenogram shows no lesion likely to be aggravated by the examination or by the subsequent manipulations. The extent of the disability is determined, the limitation of movement defined; and fibrous adhesions are broken and any obstruction capable of being rectified is overcome. No undue force is ever used, and in no case has inflammation or notable swelling followed, while considerable improvement has, in practically every case, resulted. Out of the first hundred cases thus operated on seventy-five returned to full duty. Massage is commenced within a

few days of the manipulation, light in character if pain be present, more firmly otherwise. The pain from the breaking down is usually quite transitory and passes off in the course of an hour or so. Massage and radiant heat are continued for a week or ten days, when exercises by weights and pulleys are commenced. During the first week of these exercises massage is still continued, as the muscles are often inclined to be painful from their unaccustomed use. In certain cases a previous attempt had already been made, and some disturbance caused, in consequence of which the joint had been immediately placed at rest on a splint. The disturbance may possibly have been immediately due to a too early interference, or a too vigorous attempt at movement. Early interference is deprecated, where there has been destruction of tissue by gunshot or shell, followed by suppuration. No joint should be forcibly manipulated when a discharging sinus exists in its near proximity.

Romer says that in moving joints under anesthesia the failure to obtain a full range of movement is of small importance, if the limitation is due to contracted muscles or induration round the joint, and undue force should not be exerted for this achievement. After-treatment will usually regain the full movement, if sufficient freedom has been obtained under the anesthetic to enable the controlling muscles to act on the joint. The less force it is found necessary to employ the better is the prognosis of a good result. Joints blocked by dense inflammatory products do not respond well to forcible manipulation, but in suitable cases of joint stiffness restoration of function is materially hastened by its employment. The treatment given in the massage department includes radiant heat, hot-water and contrast baths, the ordinary massage manipulations and movements, besides the faradic, galvanic, and sinusoidal currents, and ionization. The treatment is given daily, in length varying according to the case, the minimum duration being half an hour. Special exercises supplement the massage, and are adapted to strengthen still further the weakened muscles and muscle groups, as well as to increase the range of joint movement. The weakened or injured muscle or groups of muscles are encouraged to act, and assisted in the action by the descent of weight, which has been raised by the sound antagonistic muscles. The repetition of this movement at first is strictly limited and the weight a light one, but as progress is made the weight is increased and the exercise lengthened. As further improvement is effected the range of exercises is extended, and becomes inclusive of those in which the weight, light at first and heavier afterward, is lifted by the affected muscles.

In Romer's opinion voluntary exercises performed on a pulley machine are in every way superior to the automatic movements obtained by mechanical machines based on the Zander type. For if a joint is so stiff that it cannot be moved or be encouraged to move voluntarily it is quicker to loosen it once and for all under anesthesia. In addition to these various forms of exercise swimming is found to be an agreeable and useful remedy in most cases of crippled limbs. As soon as the weakness of the special muscles or muscle groups has been overcome, and in cases in which there is no specialized muscular debility the proper use of ordinary gymnastic apparatus proved of material assistance in restoring the general tone of all the muscles and of thus taking part in the

restoration of the lost function. The playing of games such as the throwing of the medicine ball, also aids in regaining the rapidity of action. It is surprising to notice how quickly men seem to forget the existence of disability in the excitement of games.—*London Lancet*.

WAR HEART.—Dr. Thomas E. Satterthwaite, after an extensive review of the literature regarding war heart reaches the following conclusions:

1. The stress of this war has brought into prominence some new phases of heart disorders.

2. The majority of these are neurotic in character, caused by physical injury, as sometimes in shell shock, or by emotions, such as fear or anger, causing disturbances of the secretions from the ductless glands. Other causes of these neuroses will doubtless be found.

3. Then there are the infections from toxins, of which the varieties are numerous. Many of these etiological factors may be common to the diseases of war and peace, as when the cause is a suppurative focus, of which pyorrhea alveolaris and mastoid disease are examples.

4. Then come the effects of chemical poisons, as from exposure to poisonous gases.

5. Myocardial affections, as the result of physical strain, occur in a comparatively small number of cases, and chiefly among the older men.

6. Success in treatment calls for both a close discrimination as to etiology and the carrying out of rational therapeutic measures.

7. Unfortunately, in some instances, it may not be possible to discover the etiological factor at first. Then a cautious tentative treatment should be undertaken. In this way a satisfactory diagnosis may usually be made.

8. If an operation of some magnitude is advisable, and the condition of the heart is a cause of concern to the operator, the patient should be prepared for the operation by a course of treatment of at least forty-eight hours. During this period the heart may usually be put in a proper condition for the strain. The remedy to be used should be either a cardiac stimulant or a cardiac sedative.

TREATMENT OF WOUNDS BY SOAP IN CASUALTY CLEARING STATIONS.—Dixon and Bates (*Lancet*, Nov. 24, 1917), following the practice of some French surgeons, used soap dressing on 368 cases. In the same period they treated cases with other antiseptics, including eusol, hydrogen peroxide, and B. I. P. P. As a result they are now using more soap and fewer antiseptics.

A sample of common yellow soap was analyzed and found to contain, per cent: Water, 24.6; fatty acids, 63.0; combined alkali, 24.6; free alkali, nil; impurities, 7.8. This was considered suitable, and it was found possible to make a 2½-per-cent solution of it.

This was first tried in small open muscle wounds in which there was no gas gangrene. After being opened up, and metal and cloth removed, the wounds were dressed with sterile gauze soaked in this solution. This dressing was left undisturbed for two, three, or four days, providing there was no rise in temperature. At the first dressing the most striking

features were less pain, the unusually clean appearance of the wound, absence of pus, and the redness of the whole of the tissues—the muscle in particular.

The dressing was next tried in deeper wounds, using Carrel's tubes in the ordinary way. Here difficulty was found with the ordinary soap solution; it was too gelatinous to flow at all well down the tube. A 2½-per-cent solution of the B. P. soft green soap was then tried, and found to be quite satisfactory.

The results were most encouraging. Cases of penetrating wounds of the kneejoint were treated by this method. The cases did very well. In cases of gas gangrene the results are usually good. The points claimed for the soap solution are that they clean up a wound quickly, the dressings are much less painful than ordinary dressings, there is a saving of labor as the dressings need only be changed every three or four days, the solution is easily procured, easily made, and cheap.

FOCAL INFECTION AND RHEUMATISM.—To the *Boston Medical and Surgical Journal* of January 17, 1918, Preble contributes a paper in which he emphasizes the point that the treatment of arthritis deformans varies with the condition of the patient. The first step is to find and remove the primary and all possible secondary foci of infection, and usually the surgeon must be called in. It must be remembered that every colony of the causative microorganism is a focus that may continue to furnish bacteria to the blood stream after the primary focus is removed. The colonies in the joint tissues may themselves be sufficiently vigorous to keep alive the infection after the surgical removal of the original source of infection. This accounts for many failures in treatment.

After the focal infection is removed, the task is but begun. Every possible means must be used to build up the resistance of the patient. Rest, fresh air and sunshine, tonics, baths, exercise, and diet must all be given careful attention.

Rest in bed is advisable if there is much active inflammation, until the excessive tenderness of joint tissues abates.

Plenty of sunshine and fresh air have the same beneficial effect in these cases as in other chronic diseases.

As regards drugs, salicylates relieve the pain, and iron and arsenic may be indicated as general tonics. The bitter tonics or hydrochloric acid in essence of pepsin may be used to stimulate the appetite.

The excretory functions of the skin should be stimulated by daily baths. Many of these patients are too debilitated to take cold baths, but tepid baths are just as beneficial.

As regards the diet, it should be remembered that the old "red meat" theory was exploded in 1902, but the idea is not yet completely eradicated. It was formerly assumed that uric acid and rheumatism were in some way related, and that the so-called red meats—beef, mutton, venison, etc.—contained more uric acid than the light-colored meats. Both assumptions were wrong. Arthritis deformans is an infectious disease, and the only respect in which food influences its course is in the way of general nutrition. As regards the "red meats," it was definitely proven over fifteen years ago that beef, mutton, etc., contain less than one-third as

much of the purin bases (from which uric acid is formed) as chicken, veal, and lamb.

Patients with arthritis deformans need plenty of protein to help build up the wasted muscles and other tissues. Recent work by the biological chemist seems to show that all of the amino acids found in the various proteids are necessary constituents of the body, and it is probable that a considerable surplus of proteid, above the quantitative proteid requirement, is necessary in order to furnish a sufficient variety of amino acids to satisfy the wants of all body tissues. Meat, fish, milk, and eggs should be given freely, and the total proteid intake should approximate 100 grammes daily.

The carbohydrate intake should be regulated according to the general state of nutrition of the patient. The obese patient should have small quantities of bread and sweets, with an abundance of green vegetables and fruits. The poorly nourished patient should have plenty of bread, with butter, milk and cream added freely to the diet. All of these patients should have plenty of fruit and fruit juices, and fresh vegetables to supply the various salts necessary for the body chemistry.

It should be remembered that the old idea, that acid fruits and vegetables cause rheumatism or "make the blood acid," is erroneous. On the contrary, practically all of the organic acids in our common fruits and vegetables form alkaline carbonates when absorbed, and increase the alkali reserve of the blood. Prunes, plums, and cranberries are the exception. Oranges, grapefruit, tomatoes, etc., with a sufficient quantity of fodder vegetables to give the necessary bulk to the stools, are indicated.

The fats are used freely or sparingly according to the patient's store of body fat. Butter and cream are, as a rule, very easily handled by the digestive tract. It is never necessary to give olive oil or cod-liver oil, as butter and cream are no more expensive, are just as nourishing and much more palatable.

The fluid intake is important. Sufficient water and other liquids, such as tea, coffee, and milk, should be given to enable the kidneys to excrete with the least possible irritation not only the normal waste products of metabolism, but also the toxins released from the dead bodies of the bacteria, or formed by the bacterial metabolism. A minimum of two quarts daily should be given to an adult. Intelligent supervision of the diet is the most important single factor in building up the health of these patients.

The local treatment of the joints in the severer cases is a problem for the orthopedic surgeon. Every possible means should be used to restore the circulation in the anemic and under-nourished joint tissues. In the stage of active inflammation rest is essential, and bandages, splints, or plaster casts may be necessary. After the active inflammation has subsided, passive motion should be used, then active motion, and finally graduated exercise of the joint to break up adhesions and restore mobility. Massage is particularly beneficial. Alternating hot and cold shower baths improve the circulation, and electricity relieves the pain and may help the tissue metabolism. The Bier treatment may be used to induce a passive hyperemia of the joint. In some cases, surgery is indicated to reduce deformity caused by contractures and ankylosis.

Vaccines may be indicated to assist in the formation of specific antibodies. The autogenous vaccine should always be used. The use of stock vaccines is unscientific, and is quite as likely to do harm as good.

Sera have been tried without any beneficial results, and in some cases distressing anaphylactic symptoms result.

HEADACHE DUE TO NASAL DISEASE.—In the *St Paul Medical Journal* for December, 1917, Putnam claims that headache is the most common symptom of affections of the nose and its sinuses, and is of great value in arriving at a diagnosis. Many cases of nasal accessory sinus disease go through life with a diagnosis of chronic headache.

There are many varieties of nasal conditions causing headache:

1. Swelling of the mucosa with pressure on its nerves.
2. Contact of the swollen mucosa.
3. Stasis following obstruction of the drainage passages.
4. Negative pressure in the sinus.
5. Reabsorption of toxins formed within the sinus.
6. Ulceration of the mucosa involving the nerve supply.

Direct contact of the swollen mucosa, such as pressure upon the septum from turbinal hypertrophies, is a very common cause of headache. These cases are being repeatedly refracted without relief of the pain or examination of the nose.

Putnam's treatment consists of shrinking the nasal mucosa with tampons of ten-percent solution of argyrol. This often affords immediate relief from the headache accompanying acute sinusitis. It depletes the inflamed tissues, stimulates ciliary motion, thereby favoring drainage from the passages. The most frequent surgical treatment consists of correcting deflected septa. Operative work upon a diseased sinus is only occasionally required.

The amount of headache in a given case may have very little bearing upon the severity of the nasal lesion. Very severe pain is often found with minor changes, or slight pain with severe cases.

To summarize: The percentage of headache caused by nasal disease is far greater than realized by the public or physicians in general. The headaches are varied both as to location and severity. Facial neuralgia is frequently due to sinus disease. Migraine is aggravated by nasal disease. Headache in the supraorbital region in chronic cases is more likely to be caused by pressure of a hypertrophied middle turbinate than by an inflammation of the frontal sinus. In chronic antrum inflammation there is a full, tense feeling over the affected cavity, with pain passing to the eye and sometimes ear of affected side. Headache in frontal sinusitis at the beginning is felt over the affected sinus. Later in chronic cases it is felt in the vertex, even occiput, and possibly the temples. In ethmoid diseases there is headache between the eyes. Many cases of headache due to sinus disease are referred for refraction. The public commonly associate headache with eye-strain, but seldom with nasal disease. Many of them have been repeatedly refracted without nasal origin considered, and yet nasal disease is responsible for the greatest number of headaches, neuralgias, and pains in the head.

NATURE AND SYMPTOMS OF CARDIAC INFECTION IN CHILDHOOD.—F. J. Poynton (*British Medical Journal*, March 2, 1918), advocates a close analysis and thorough understanding of cardiac infection in childhood, as this points the way to rational treatment of heart affections, i. e., prevention. Textbooks and general teaching have given undue emphasis to the mechanical factors found in later life rather than to the response of the heart to infection. Of the several infections which may involve the heart the most important is rheumatism. The study of the manifestations of rheumatism in childhood is the study of the introductory chapters of cardiac disease. The first generalization to be made is that the severity of the resulting cardiac affections depends upon the virulence of the rheumatic infection, and the element of virulence is more important in prognosis than the physical signs in the heart. The infection may take place through the tonsils, and acute tonsillitis should always call for careful examination of the heart. It must be remembered that there is no characteristic form of throat infection in rheumatism, but that any type of infection may be rheumatic. Chronic adenoid vegetations are important in this connection also. Arthritis of various forms, chorea, and less well defined nervous disturbances in children are also commonly of rheumatic origin, and their presence demands examination of the heart. The same is equally true of a number of skin manifestations, general wasting, anemia, obscure persistent fever, subcutaneous nodules, and such abdominal symptoms as bilious disturbances, distension, appendicitis, etc. It should be remembered that not only is anemia a manifestation of rheumatism, but also the presence of anemia tends to favor the development of the malignant forms of endocarditis. The pathological lesions of the disease, as found in the heart, are similar to those found in other tissues.

PRIMARY SUTURE OF WOUNDS.—Bowlby (*British Medical Journal of London*) presents a summary of the results obtained in the treatment of wounds by various methods and emphasizes one method in particular, that of primary suture of wounds. He says that while success depends on many conditions which are beyond the control of the surgeon, it depends very largely on the surgeon himself. Primary suture of wounds is more likely to end in disaster than in benefit unless the operation is most carefully performed, and this implies, in the first place, the most minute aseptic precautions, such as are commonly practiced by British surgeons in their most serious operations in civil work. No more skin should be excised than is absolutely necessary; even if badly damaged it can be saved. In the next place, the operation must be done most deliberately and thoroughly, so that no part of the wounded area escapes treatment. This all means a good deal more time than is required for the opening up and cleansing of the average infected wound which is not suitable for suture, but it is time well spent, especially if the case is one of fracture. On the other hand, operation for the excision and cleansing of small superficial wounds can be done quite quickly, and no class benefits more than these by this method of treatment. It is in the class of slightly wounded, with injuries of the soft parts, or flesh wounds, that early and careful operation yields the highest proportion of success. Hitherto,

when wounded are numerous, these patients have habitually been carefully dressed but not submitted to operation. Often many weeks or months have elapsed before their wounds have finally closed, and for all this time they have been inmates of hospitals and frequently confined to bed. Some of them have had serious complications as well. Successful suture makes a complete cure of such patients in a time measured by days or weeks instead of by months.

The benefit to the more seriously wounded is still more obvious. Not only are compound fractures converted into simple ones, but the period of confinement to bed and to the hospital is greatly shortened. The absence of sepsis is well seen in the features of the patients, whose good color tells its own tale. There is none of the general loss of flesh, none of the shrunken and stiff, wooden-like limbs seen after prolonged suppuration, none of the stiffness of all the joints of the affected limb which is so long in recovering. Out of a total of 626 cases, 68 per cent. were successfully sutured and healed by first intention. At the observation hospital 123 wounds have been sutured, with success in 83 per cent. In these three separate areas there is a total of 1,202 cases under various surgeons, with success in about 70 per cent. Moreover, in many of the remaining 30 per cent. there was a very early closure of the wound in spite of superficial suppuration. The success obtained in cases of fracture is also very striking, showing 75 per cent. of successes. The amputation cases at the observation hospital have been few, but they also have been very satisfactory. Of eleven cases all the patients have recovered. Seven were amputations through the thigh, two through the leg, and two were Syme's. Ten out of the eleven healed soundly either after immediate suture or after closure of the flaps on the third or fourth day. One failed to unite, and suppurated. Another very satisfactory result is that the whole of the patients have, so far, recovered whose wounds were sutured at the observation hospital. There has as yet been no death in the 175 patients operated on for suture, whether the latter was successful or not. Yet many of these men were very badly injured. More than 40 of the 175 had fractured bones; 2 of them had torn femoral arteries (but have kept their limbs after ligation of the vessel); 2 had torn posterior tibial arteries; 8 had wounds opening the knee joint, in one of which the patella had to be excised; several had fractures opening the elbow joint; more than 20 had multiple injuries; 2 of them required transfusion of blood. Bowlby does not believe that all these men would have recovered if their wounds had not been closed.

The application of this treatment must remain largely a question of man power from first to last. First, it is only by having enough stretcher-bearers that the British can get in the wounded who cannot walk, and, one must add, enough strong stretcher-bearers. If men are not brought in soon their wounds cannot be sutured, so it is really a race against time and against the microbic infection, which has got the start of both stretcher-bearers and surgeons. Difficulties exist which, though they might not be thought of by the inexperienced, explain why men may arrive too late without any one being to blame. Both many and strong stretcher-bearers are required, and it is difficult to provide too many. It is not clear that delay in reaching a casualty clearing station may be

unavoidable. In the second place, primary suture of wounds evidently requires surgeons in proportion to the number of the wounded. The British have already been able to operate on almost all the most serious cases at the casualty clearing stations in recent battles, and one wounded man out of about every three wounded was passed through the room and operated on under an anesthetic. The remaining two thirds were sent to the base, and many of them were in the class of the lightly wounded. In future, the wounds which have been excised but not sutured at the front, as well as probably some not yet excised, will be dealt with by hospitals placed further back than the casualty clearing stations, and thus, if there are enough surgeons, and if wounded are not too numerous, the surgeons hope to be able to insure that a majority of all suturable wounds shall heal by first intention. If their expectations are realized patients will not be so long in the hospital, and there will be less strain on staffs at the bases both in France and in England. Much depends on the incidence of the wounded and on the supply of surgeons. Bowlby puts in a special plea for plenty of medical officers in France.—*Journal A. M. A.*

BACTERIA AND CIGARS.—In all, 118 cigars were studied, and from each an abundant growth of bacteria was obtained. In the majority of instances spore forming organisms developed. Among these were the following: *Bacillus mycoides*; *B. simplex*; *B. cohaerens*; *B. subtilis*; *B. megatherium*; *B. albolactus*; *B. Mesentericus vulgatus*; *B. mesentericus fuscus*. Streptococci were found in four instances, but not obtained in pure culture,

In fourteen instances, staphylococci were isolated in pure culture, i. e., staphylococcus albus and aureus. These cultures were inoculated subcutaneously into guineapigs, but apart from some induration, only lasting a day or so, no further effects were noticed; in other words, no pus was formed. From twenty-five cigars, a small motile organism resembling bacillus coli in morphology was found, and in some cultural characteristics, but only two of these gave indol production and fermented various sugars. From one cigar, cocci were obtained, arranged in pairs, biscuit shaped in morphology, Gram negative in their staining reaction, resembling gonococci. This cigar was taken from the pocket of an individual.

In the cigars wrapped in paper or in tinfoil, the bacterial flora was just as abundant and even more varied than in those which were obtained in the usual unwrapped condition. In the cultures made from the inside of the cigar, the spore bearing organisms were more abundant than non-sporiferous bacteria. From these studies, it is seen that bacteria in the most resistant form (spore bearing) exist upon and in all varieties of cigars.

We have failed to positively demonstrate any virulent pathogenic or pyogenic organisms, but from the occurrence of staphylococci it is evident that the practice of moistening with the mouth or tongue the end, or twisting the end with the moistened fingers should be forbidden. Although the large manufacturers disclaim any of these methods of working in good cigars, a great deal certainly does exist in the small manufacturing plants, and where a person is recovering from an illness or does not take proper care of his teeth or his mouth, it is possible and probable

that virulent pyogenic organisms or even pathogenic organisms may survive an indefinite time in tobacco.

With regard to skin diseases, tuberculosis or contagious diseases, the selection of individuals for the making of cigars should be just as strict as in the case of individuals employed as waiters or dairymen, in fact, as a measure for the protection of the public. The same rules regarding a dairyman or waiter performing his duties in cases of nursing or convalescing from a contagious illness at home should be applied to the cigarmaker.

There does not seem to be any great danger in the practice of biting off the end of the cigar before smoking, but from an hygienic and esthetic standpoint, we would suggest the clipping of the end with an individual cutter or the perforation of the smoking end with a proper appliance.
—*New York Medical Journal*.

AN IMPORTANT DISCOVERY.—Editor "*Western Medical Times*:"—I asked an ex-surgeon of the U. S. Army this question: "Suppose a man comes before you and says he is in *pain*, how can you tell if he is in pain or not?" His reply was, "You *can't* tell, you have to take his *word* for it."

I have found out that when there is *pain* in any part of the body there will be a *tension* to the pulse, and *contraction* of the pupils of the eyes. *No tension* to the pulse, *no contraction* to the pupils of the eyes, *no pain*!

I have also learned, by experience, that there is a great difference between the pulse of the right and left arm. The pulse of one arm tells us of the vitality of the constitution of the patient. The pulse of the other arm tells us of the local trouble, the real, the true condition of the sick person.

When the time comes by proper treatment that the pulse in both wrists are *alike*, *full*, *strong*, and *regular*, the patient is near well.

Therefore it is always best to read the pulse of both wrists. Remember that when you read a person's' pulse Dame Nature is sending a message over the wire (artery) to you and *it is your business to interpret that message correctly; if not, so much the worse for you and for your patient!*

I believe that the above is the most *important* discovery of the century. *Try it out* in your daily practice, for there is *more* in it than you may realize.

Monthly Retrospect

OF HOMŒOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

CONTINENTAL HOMŒOPATHY: GREAT BRITAIN—The first notice taken of the new system of therapeutics was by the Medical Society of London in 1826. In 1827 the physician of Prince Leopold of Saxe-Coburg, Dr. F. H. F. Quin (1799-1878), who had previously studied homœopathy in Germany and practiced it in Italy, came to England, and it was through his efforts that the system was introduced. Quin was a successful man professionally and socially, and brought upon himself in a short time the anathema of the Royal College of Physicians. In 1844 Dr. William Henderson, professor of pathology in the University of Edinburgh embraced the Hahnemannian system and he is the author of a volume entitled "Homœopathy Fairly Represented."

From 1827 to 1837 there were but a dozen practitioners of homœopathy in London, but during 1837 to 1847 the number increased to between seventy and eighty. In 1857 there were upwards of two hundred practitioners in the kingdom, with thirty-three institutions in which the law of similars was used as a basis for practice.

A society was formed about 1867 for "the protection of homœopathic practitioners and students," which proved of great value in binding the sect together. In 1870 congresses were established, and annual meetings held, which have continued to the present time. In 1901 there were over three hundred homœopathic physicians in the British Isles, of whom between seventy and eighty were in London alone. There were seventy-nine chemists, of whom seventeen were located in London, and eighty-two towns and cities in the country contained from one to ten homœopathic practitioners each, together with many established chemists for dispensing homœopathic medicines. The British Homœopathic Society was founded by Quin in 1844, and has numerous members and fellows, besides corresponding members in all portions of the world, including Australia, India and Tasmania.

The London Homœopathic Hospital was founded in 1850, also largely through the efforts of Quin, and a few years afterwards moved to Great Ormond Street. During the cholera epidemic of 1854, the statistics of this hospital showed a mortality of 16.4 per cent., against 51.8 per cent. of other metropolitan charities. The London Homœopathic Hospital has a convalescent home under its management at Eastbourne. There are also many dispensaries in Great Britain.

The homœopathic journals include the *Homœopathic World*, the *London Homœopathic Hospital Reports*, the *Journal of the British Homœopathic Society*, and the *British Homœopathic Review*, the last being issued

by the British Homœopathic Association, which was founded in 1902 for the purpose of developing and extending homœopathy in Great Britain. The British Journal of Homœopathy was first published in 1843, and was edited by Drs. Drysdale, Russell and Black. For many years it was the foremost homœopathic journal in the world.

RUSSIA.

The homœopathic system was introduced into Russia in 1823. In 1825 great impetus was given to the new doctrine by the conversion of Dr. Bigel, physician to the Grand Duke Constantine. In 1829 the Grand Duke ordered a series of experiments to be conducted to prove the truth or fallacy of homœopathy, and they demonstrated the success of the new school. In 1841 a hospital was established in Moscow, and in 1849 similar institutions were founded in Nizhniy-Novgorod. Since then homœopathy has been steadily practiced, and has penetrated to the remotest parts of Russia. In 1881 the civil engineers proposed to commemorate the virtues of the Emperor Alexander II, by the erection of a hospital. A committee for collecting funds was created and 58,064 roubles were handed to the Charity Society of the followers of homœopathy at St. Petersburg for the erection and funding of a homœopathic hospital. The foundation stone of the edifice was laid on 19th of June, 1893, the Emperor Alexander III giving 5,000 roubles. The inauguration of a new dispensary and a pharmacy took place on the 19th of April, 1896, and the hospital itself, intended originally for fifty beds, was opened on the 1st of November, 1898. There are sixteen free beds, three of them being in the name of the Emperor Nicholas, the Empress Maria Feodorovna, and the Emperor Alexander III. On the 28th of January, 1899, an imperial edict was issued granting the rights of public service to the doctors of the hospital and dispensaries of the Charity Society, thus placing them on an equality with the doctors of the prevailing medical school.

FRANCE.

Homœopathy was first introduced into France in 1830 by Count de Guidi, doctor of medicine and inspector of the university, who practiced in Lyons. About the same year Dr. Antoine Petroz, widely known by his *Grand Dictionnaire Des Sciences Medicales*, began practicing homœopathy in Paris, and his establishment became the headquarters of the new system there. In 1835 Hahnemann himself came to the capital. In 1832 the homœopathic method of treating disease was introduced into the Hospice de Choisy, and in 1842 into the Hospital of Carentan. Tessier practiced the new doctrine in his wards in the Hospital St. Marguerite, and in the Children's Hospital up to the year 1862, when he retired. The first homœopathic society was established in 1832, Hahnemann becoming president in 1835; in 1845 the Societe de Medicine Homœopathique was organized; and in 1860 the two were united for the better interests of the school. In 1901 there were at Paris three hospitals—the Hospital St. Jacques with fifty-five beds, the Hahnemann Hospital with thirty-five beds, and the new Protestant Hospital for Children with twenty-five beds. At Lyons there is the Hospital St. Luc. The medical journals include *L'Art*

Medical, *La Revue Homœopathique belge*, *Journal belge d'Homœopathie*, *La Therapeutique Integrale*, *La Revue Homœopathique Francaise*.

In the year 1900 the medical officers of the republic having supervision over the medical department of the International Exhibition officially recognized the members of the homœopathic school, and arranged for the proper accommodation and reception of the International Congress of Homœopathic Physicians held in June. On the 30th of the month, with appropriate ceremonies, the remains of Hahnemann were removed from the cemetery of Montmartre and deposited in Pere-la-Chaise, and a monument bearing a suitable inscription was erected to the memory of the founder of homœopathy.

ITALY.

The Austrians, when they entered Naples in 1821, brought homœopathy into Italy, the general in command of the army being a devoted friend of Hahnemann. In 1828 Dr. Count Sebastian de Guidi came from Lyons and assisted in spreading the doctrine. During the period from 1830 to 1860 many physicians practiced homœopathy, and the literature on the subject became extensive. A homœopathic clinic was established and a ward opened in Trinity Hospital at Naples, and a homœopathic physician was appointed to the Count of Syracuse. During the severe cholera epidemics of 1854, 1855, 1865 the success of homœopathic treatment of that disease was so marked, under the care of Dr. Rubini, that the attention of the authorities was directed to the system. In 1860 the homœopathic practice was introduced into the *Spedale Della Cesarea*, and since that period with more or less favor in most of the cities.

The Italian Homœopathic Institute is recognized by royal warrant as an established institution, and its regulations are approved by the government. In Turin, the legal seat of the Homœopathic Institute, there is a hospital under the management of the State Association. The homœopathic medical press consists of the *Revista Omiopatica*, established in 1855, and *L'Omiopatie in Italia*, the organ of the Italian Homœopathic Institute, which first appeared in 1884.

SPAIN.

Homœopathy was introduced into Spain in 1829 by a physician to the Royal Commission sent by the King of Naples to attend the marriage of Maria Christina with Don Ferdinand VII. Shortly after this, a merchant of Cadiz visited Hahnemann in Coethen, and was cured of a serious disorder; he returned to Spain with a supply of homœopathic literature, and immediately sent a medical student to Leipzig to study the new system. In 1843 many cases of cholera were treated homœopathically in Madrid. The civil war, which did not terminate until 1840, arrested all medical investigation in Spain, but in 1843 there still existed in Madrid five pharmacies and a number of homœopathic physicians.

About this time Dr. Tesi Nunez returned from an investigation of the new system with Hahnemann, and owing to his success in the treatment of disease, was created one of the physicians of the bedchamber to the Queen, who soon afterwards conferred upon him the title of Marquis, with the grand crosses of the Charles III and of Civil Order of Beneficencia. This recognition by high authority gave an impetus to homœopathy which has continued ever since.

W. T. H.

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THE INFLUENCE OF HAHNEMANN UPON THE PRACTICE OF MEDICINE.*

BY

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It is a far cry from all that is represented by the great institutions of our school to that humble home at the corner of the Fleischstege and New Market Street, in the City of Meissen, where Samuel Hahnemann was born: and when that event occurred, on April 10, 1755, there was no sign to indicate the vast influence he was destined to exert upon the welfare of mankind, save, perhaps, that he was to be reared amid environments which embodied those primitive virtues of integrity and honesty of purpose which have ever surrounded the early years of the world's other great men.

It is many years since the natal day of Christian Frederick Samuel Hahnemann, and three quarters of a century have elapsed since he went the way of all flesh, and passed beyond the checkered vicissitudes of a long life. He rests from his labors: but of no man who ever lived are the words of St. John more true, that his works do follow him: for it is likely that the medical scientific world and humanity itself can never escape from the influence of his great contributions to them both. We do well, therefore, to bring our tokens of veneration to grace the places sacred to his memory in our consciousness.

*THE HAHNEMANN ORATION, delivered at the April, 1918, meeting of the Homœopathic Medical Society of Germantown, Philadelphia.

To anyone who has given serious attention to the study of Hahnemann's life and work, the temptation to eulogize is ever present. We can scarcely refrain from magnifying his great contributions to medical science; we marvel at the clearness of his perception in a time of confusion and uncertainty; we admire his scholarly accomplishments, though obtained and unescapeably obtained by the compelling hand of adverse circumstances; we are charmed by the directness of his lucid thought which led him to great discoveries, whose grandeur is their very simplicity; a circumstance, as we know, *not* unique in science. Boerhaave has said that simplicity is the seal of truth.

We may inquire the reasons for these mental traits, and having weighed the influence of his circumstances in life and his environments, we encounter the potent influences of heredity and early training. I wonder do we adequately appraise their power *in men*, though we recognize their value in our horses and in our dogs.

How shall we visualize the influences of heredity and of early training? I might recite a long series of statistics showing the influences of heredity as they have been studied in the Edward's and Juke's families. But I will not do that now, but rather in more pleasing vein, let us regard an instance which, though from the hand of a novelist, is quite true to nature.

In the story of Ben Hur occurs a scene which has impressed and captivated most readers. Reference to it has often been made. It has stimulated the imagination and excited the admiration of thousands. I refer, of course, to the chariot race in the circus at Antioch. You probably recall the description of that brilliant scene and the artistic touches of local color that make it so real, and so easy to live over again each thrilling incident. And you remember how the horses driven by Ben Hur triumphed—triumphed gloriously.

But there is another scene not so often mentioned. What were the factors that led to success in that great contest? In order to answer that question and to appreciate at least *one* most material factor, it is necessary to turn back a few pages in the story and look upon that other scene.

In the tent of the Sheik Ilderim, Ben Hur has preferred his request to enter the horses in the race, in the hope, *not* of winning 10,000 sesterii, a fortune for life, but of gratify-

ing his revenge by humiliating his enemy, Massala, in a public place. The old Ishmaelite tells the youth he knows not the extent of his request, and recounts the qualities and the virtues of his treasures, his friends, the horses; while they, standing near, their clean breath coming in waves of warm sweetness, explore his garments or his extended hand with their moving lips.

The Sheik claps his hands to call the slave, to whom he says: "Bring the records!" When the chest is brought and opened, behold the bundles of thin ivory tablets upon which are burned the genealogical records of these noble animals showing their lineage to date back to the brood of the first Pharaoh! When we have grasped the full import of *that* fact, together with all the nurture and training it implies, we can understand at least one reason why they won the great contest, and we have also seen a fine illustration of the influence of heredity.

Now in the case of Hahnemann we will miss much if we fail to estimate his descent from a noble father who possessed fine moral qualities, and who was ever strangely concerned that the boy should acquire those virile mental traits that would free him from cringing acceptance of any fact upon the mere dictum of authority, without having examined its validity for himself. Likewise was this good man concerned the boy should learn to think for himself—to think *clearly*, with that effective directness that leads to tangible results. If we fail to recognize these circumstances in the early training of Hahnemann; or do not properly appraise the influence of a father's guidance which ever acted in accordance with the eternal principles of uprightness, we, living in a materialistic and money-mad time, will be woefully astray concerning him. It has been the fate of Hahnemann that those who differed with him during life, have treated his memory with singular injustice. Of one fact we may rest assured, namely, that Hahnemann was not an ignorant man; not an idle dreamer; and by no means a charlatan who traded with deception. This would be contrary to nature, as I have shown, and is amply disproved by the internal evidence of his works.

It is not my purpose to review the dark story of his malevolent persecution. The causes for that persecution lie fully revealed in the strangely evil spirit of his times, and in the astounding perversity of mind of the members of the noble

profession of medicine! Dudgeon has summarized it all, when he said: "The history of homœopathy is the *indictment* of the medical profession."

But let us turn to more agreeable things; let us examine what has been his influence upon medicine. In order to do so, we must turn to the history of medicine itself. But here, in the opening pages of records like that of Roswell Park, we encounter the statement that "The history of medicine is really a history of human *error* and of human discoveries." Though this statement is somewhat disconcerting, we know it to be true. But for all that, did time allow, it would be an entertaining pursuit to trace the history of medicine from the dim origin of things. We would see how the art of medicine probably began with primitive surgery, when some prehistoric man quenched the red flood flowing from the accidental wound of a comrade in the hunt, as a poet has described it. We would follow it through that long period of time when disease was regarded as resulting from the malign influence of evil spirits whose favor must be sought by incantations and by sacrifices, such as every primitive race has employed. Later the much more elaborate, and in fact gorgeous ceremonies in the temples, looking toward the restoration of the sick. And then the votive offerings in the temples—what a mass of interesting subjects such a survey would reveal.

But long before this we would see the first evidences of *sectarianism* in medicine when a shepherd or herdsman took the herbs and simples, found so effective in the ailments of his flocks and herds, and applied them in the sickness of a human being quite contrary to the constituted authorities of procedure in such cases, resident in the temples. Yes, and in the temples, these same priests heaped anathemas upon the simple folk, who would apply to a human being that which was found effective in a sheep or a dog, all the while they themselves *surreptitiously* applied these same medicinal substances; for we read that one Julien was ordered by the oracle to take the pine seeds from the altar which had been three days mingled with honey, and who was thereby cured of hematemesis. This incident has some tints familiar to the homœopath, especially the surreptitious part of it, when he remembered monk's hood or wolf's bane, and wild hops, and poison oak, and—oh! lots of others.

This is an illustration of the practice of medicine which

continued through many, many years while men made great progress in *material things* which they spoke of as *civilization*.

Of course, we cannot tarry to trace the evolutionary changes which affected medicine from the dawn of history to the time upon which we have set our eyes. But let us say comprehensively that the history of medicine is really the history of therapeutics, for men have ever looked to *drugs* as remedial agents. So it was when the alchemists searched for the philosopher's stone, and when their highest endeavors reached out for the Panacea, the universal cure-all for the ills of mankind. From various sources we can get some interesting glimpses of these times, from which we can readily imagine the hours of lonely research, reaching far into the night when the alchemist's mind finally recoiled from the futility of all human knowledge, and brushed aside the test tubes, and the retort and the crucible (on which was the sign of the cross, according to the historians, and hence the word crucible)—and with an impatient expression like that of Dr. Faust, turned to other things, such as—but you know the story.

The imprint of those times remained, and after a long period of empiricism the retorts and the crucibles, and the stills and the percolators were again in use; but this time by *scientific* medicine, which manufactured many strange chemical remedies, splendidly devised to meet each phase of the intricate theories of disease, which sprang from the mind of the doctor, all the while that mankind continued to get sick, to suffer when they did so, and to die.

Now we may speak playfully about those times or even treat them with irreverent hands, but let us never forget that it was *just then* that some of the greatest contributions to medicine, or rather to its foundation branches, like anatomy, were made. The anatomical names in common use today attest the truth of what I am saying, and the anatomists, together with many others, are among the galaxy of great names that shine upon the pages of history devoted to the most exalted endeavors of men.

At the time of Hahnemann the medical science of the day bore the imprint of many of the traditions and practices of the ancients. It was not rid of the tendency to speculate about matters relating to medicine, instead of obtaining accurate information from the observation of natural processes,

and it bore the character developed during the two hundred years since the time of Paracelsus. Instead of being concerned with the study of the action and use of medicines, it still gave attention rather to formulating so-called systems, and hypothesis and theories about the nature of *life*, and of disease. In the light of today they seem but grotesque and distorted curiosities. Anatomy and physiology made great advances in the seventeenth century. But these great discoveries had but little effect upon the practice of medicine. In fact, Clifford Allbutt has said that "Medicine in Germany was almost grotesque until the days of Rokitansky, and Müller." How strange, when we consider that Rokitansky (1804-1878) was a pathologist, and Johannes Müller an embryologist and a physiologist.

It is true that Sydenham (1624-1689) had appeared and had done so much to rescue medicine from the asphyxiating influence of speculation and theories; he had pointed anew, since Hippocrates, to the value of observation and experience; he did much to abolish the polypharmacy of the times, relying mainly upon vegetable remedies; and we may say he discovered the healing power of nature.

But following him came other physicians having many brilliant attainments, who again diverted scientific medicine from the simple paths which led to rational fundamentals, into the pernicious tendency to speculate rather than to observe and deduce. Among them was Stahl (1660-1734), with his "anima," resembling the "archaeus" of Von Helmont, and whose hypothesis of plethora gave modern sanction to the pernicious evacuant treatment and to the crimes of venesection; Frederick Hoffmann (1660-1742), and his mechanico-dynamic system; Haller's doctrine of irritability; Kampf's doctrine of infarcts; Borden (1732-1796) and his teachings of vitalism; also Barthez (1734-1806), and in Germany Reil (1759-1813) who elaborated it into a system. In his article on the "Evolution of Internal Medicine," (page xxv), Osler has summarized the situation by saying: "At the end of the eighteenth century men were floundering in a sea of speculation, and there was no definiteness in diagnosis, nor any safe bases for treatment."

If we can see the picture which these few strokes of Osler's masterly pen have outlined, we can readily imagine the effect it had upon Hahnemann's mind, constituted as I have

shown you some moments ago. We can also see why he begins his *Organon* with the postulate: "The first and *sole* duty of the physician is to restore health to the sick," and immediately adds the footnote saying that it is *not* his mission to indulge in speculation and the making of theories.

At this time, Cullen enjoyed the greatest reputation as an authority on *materia medica*. When drugs are arranged in classes such as astringents, emetics, expectorants, emmenogogues, tonics, etc., we see the influence of Cullen.

But these classifications were by no means satisfactory for the practical physician, and the action of the drugs ever required the skillful and adroit reasoning of Cullen to explain. It was this which led Hahnemann to examine for himself. You know the story of Hahnemann's translation of Cullen's *materia medica*, and how he was attracted by the discrepancies in the article on cinchona—a drug not yet fully known though used in Europe since 1638 in the case of the Countess of Cinchon.

You know also of the epoch-making work of Hahnemann and of his writings, which finally led to the *Organon* in 1810, wherein he proposed the first co-ordinated and scientific method of treating the sick.

Dr. James Krause, of Boston, some years ago, made an observation which has by no means received the attention it merits. He said that both friends and foes alike have for one hundred years mistaken the real achievement of Hahnemann and consider the unessentials and forget or overlook Hahnemann's essential contribution to medicine. In his article on the two most far reaching discoveries in medicine he has pointed out that no greater discovery was ever made than that of Hippocrates when he found that disease and injuries are of *natural origin*. His great achievement was that he, for the first time recognized that diseases are of *natural* and *not* of *supernatural* origin; that diseases are caused by agencies that can be removed and whose effect can be neutralized; that medicine, like any other natural science, is subject to the natural law of cause and effect. Law governs all things, said Hippocrates. This is the great truth that led to observation and investigation in all departments of medicine.

But there is another equally great discovery which was made by Hahnemann. As Hippocrates brought disease action within the category of observable phenomena, so Hahnemann

brought drug action within the category of observable phenomena. He discovered that drugs produce in the healthy body series of subjective and objective symptoms, corresponding to *entire disease pictures*. This discovery was secondary only in time to the great discovery of Hippocrates. The two discoveries are of equal import to the scientific practice of medicine.

Thus has Dr. Krause stated some important facts which have, without doubt, exerted a great influence upon medicine, regardless of whether or not Hahnemann received credit for them.

This leads me to refer to an unpleasant fact, an ineffaceable evidence of the bigotry of former days and of the old time persecution of everything associated with the new school of medicine—a fact which those of us who are not actuated by partisan motives greatly deplore, because it reflects upon the integrity of the dominant school and upon the liberality of our profession at large. I can best state the matter in the words of Dr. Charles Gatchell: “There is a lack of candor in failing to give due credit to homœopathy as being the source of their knowledge. It is almost unparalleled in the world of literature. A writer on all other subjects *quotes* authority and makes acknowledgment when he makes use of material which he obtains from another author. The world has set the seal of its condemnation upon him who intentionally neglects such act of simple justice. It is remarkable that the old school profession should present the only conspicuous example of a violation of this ethical law.”

For this reason we need not look for many years for any frank acknowledgment that Hahnemann has done anything worth while, much less has shown a better way to physicians, either in the science or in the art of medicine. It is true we meet with such begrudging concessions as that of Roswell Park. He has been speaking of the rampant theories of the times, of the irrational polypharmacy, of the horror of venesection, and then asks: “Is it strange that homœopathy or any other heterodox system sprang up in the midst of such surroundings?” And then he says: “As just intimated, homœopathy was the natural reaction against such heroic measures; in the rebound the other extreme was reached, even to practical therapeutic nihilism. Now instead of venesection and drastic medication, come the theories expounded by

Hahnemann which denied disease, admitting only symptoms."

Of course, one is always tempted to reply to statements displaying such lamentable ignorance of Hahnemann's work, but of one whom I esteem as I do Roswell Park, I can only say, he is not properly informed; and in confirmation of some of Hahnemann's views I might cite so good an authority as Clifford Allbutt, who unconsciously defended Hahnemann when he said in 1898: "Even to this day physicians have not assimilated the lesson that disease is *not an entity* but a particular state of the body and has no more of a separate and objective existence than, let us say, the constellation of the Great Bear or Charles's Wain."

Another of these grudging acknowledgments that the homœopathic method of cure has exerted upon medicine at least *some* beneficial influence, and has not experienced that mournful mortuary termination, as it were, which its less distinguished but more rabid opponents have predicted for a hundred years, is that of Prof. L. F. Barker. He said: "Consistent homœopaths who pushed their minimal dosage to such a degree that any conceivable drug effect was prevented did much, though unintentionally, to illustrate the healing power of nature unaided."

We have before us, then, some really important acknowledgments that Hahnemann exerted *much* influence upon the practice of medicine. I am persuaded that his influence for the welfare of mankind has been so great that even did his method not present a rational therapy, the ameliorations of existing harsh procedures in practice have made it amply worth while. It is quite difficult in the present day to realize how great these ameliorating influences really are. When we consider polypharmacy and drastic procedures in practice, now entirely condemned but once luxuriating in a department of science most intimately related to the welfare of men, at a time when the world of science and literature was alive with the names of the illustrious men who lived in the early part of the nineteenth century, and when we consider Barker's words that the history of therapy is the history of medicine, we wonder indeed why should the spirit of doctors be proud. It is a woeful commentary upon the practice of medicine that the phrase "as bad as a dose of medicine," could have become crystallized in our common speech.

I wonder do we appreciate just how much it means that

our sick folk now escape the follies of venesection? It was practiced on many occasions, especially by that school which based its conception of inflammation, and of fever, and of disease in general, upon *plethora*. If the procedure did not avail, and a consultant was called the indications to him were clear enough: the bleeding had not been sufficient, and it was repeated. If some uncertainty existed as to whether plethora was the real cause of the illness, venesection was practiced *as a diagnostic* measure; if it acted favorably, the diagnosis was confirmed; if the effect was *unfavorable*, well then—but why specify? Do you know, that that phrase “bled white,” which in these hideous times we now hear applied to noble France, *is really a medical term*, once deliberately used by physicians in their recommendations to aid the sick?

But venesection likewise had its tragic side. I recently visited Mount Vernon, that shrine of patriotism and of liberty, where the spirit of the great Washington still seems to linger. I stood in his library, and saw his surveyor's chain, his theodolite, his books, his globe; and looking out of the windows, I beheld the views upon which his eyes had often dwelt, especially that one along the Potomac. I tried to catch a glimpse of the influence of all these environments upon his mind; and thought of how much he had influenced the destinies of this land. I walked to his bedroom and looked upon the intimate evidences of his life. At that moment the guide unfortunately said: “And that is the bed upon which the General died.” At once the incidents of that occasion reappeared; his ride from Alexandria in the rainstorm; the fever that night and his aphonia; the visit of the attending physician and *venesection*; the alarm of the family; the consultation and some *more bleeding*; the failure of the illustrious patient to respond—and—yes! that is the bed upon which the General died.

They tell us that the homœopathic method did much to change all this—that it was the only agent in that great reform, we have never claimed.

HYGIENE.—For reasons which we need not recount, Hahnemann became convinced of the value of those laws of health and practices of correct living comprised in what we call hygiene. His knowledge of what it had accomplished among the Greeks aided him in a practical way, and his reverence for Nature probably inspired him; but at all events,

Hahnemann became one of the foremost hygienists of modern times. This is a delightful phase of Hahnemann's influence upon practical medicine. You can find the details for yourselves in his writings, or you can find them admirably collected in the articles by T. G. McConkey and Richard Håle (T. A. I. H., 1905, p. 465, and Hah. Mon., May, 1910, p. 321).

Such articles are full of surprises, for they show that most of the things we regard as quite modern in hygiene were advised long ago by Samuel Hahnemann. His influence in this respect upon the practice of medicine was so great, that his opponents have even alleged that all his cures were due to this alone, and that he demonstrated the curative powers of Nature unaided. Well—how fortunate that he *did* make cures, and did at least demonstrate something!

Now Hahnemann's influence extends beyond that which might be spoken of as negative or modifying, and beyond the related subjects of practical medicine. These are but corollaries of the homœopathic method. His great work consisted really in proposing to the medical world an entirely new and revolutionizing method of therapeutics. And will you permit me to suggest, that in doing this, Hahnemann had not the slightest intention of founding a separate *school* of medicine. In publishing his discoveries he simply followed the recognized ethical methods previously pursued with his former writings, and the *sectarianism* with which we are charged, is simply the unescapable result of the bigotry and lack of vision of his times.

In the homœopathic method, based upon the law of similia, known even before the time of Hippocrates, Hahnemann gave, as Cowperthwaite has said, "The only theory in medicine that has ever stood the practical test of a century's application and experience. The other theories have failed because physicians have been endeavoring to discover the *nature* and *cause* of disease upon which to found a system of *therapeutics*. In this they have signally failed, for the reason that the nature and causes of morbid influence are, in a measure at least, hidden from our view, and ever will be. Physicians have theorized upon false premises, and have been led into extravagant and ludicrous errors. *This has been the history of medicine*, and Hahnemann has been the only observer who

has dared to base a principle of cure upon other than a misleading pathological basis."

Of the homœopathic method, Sutherland also has well said: "It is a definite method, in harmonious accord with the dictum of Nature. The method offers no affront to Nature. It does not assume to coerce Nature; it studies, and then seeks to work in harmony with certain natural laws. It is a guiding therapeutic rule; a principle which within its sphere of action is as constant, certain and immutable as are Nature's laws everywhere. It does not leave one hopelessly waiting for the slow, perilous teachings of accumulated personal experience, with its possibilities in the way of mistakes, accidents and failures, so fraught with perils to others; experience which mounts not only on its dead self to higher things; but too frequently on the dead selves of its trusting friends and patients."

THE PROVEN DRUG.

That cardinal principle of the homœopathic method, which at once places it within the pale of science because it fulfils the fundamental demands of science for accuracy, namely, that the action of drugs shall be *accurately* studied before being used upon the sick, has had a wider influence than we can estimate.

It is the great merit of Hahnemann to have pointed out that drugs have the power of making people sick; that they possessed the power of producing a disease-picture as clearly defined as that produced by any germ or other cause of natural disease. This sickmaking power exists regardless of whether the person be ill or well, but that the pure action of the medicament could best be ascertained by experiments upon the healthy; "provings" he called them. As Sutherland says: "It is this very fact that drugs *do* have power to disturb normal conditions in healthy people, that makes them of possible use in the treatment of people whose normal conditions have by other causes been disturbed."

Now Hahnemann was not the first to recognize the necessity for drug provings, but he was the first to *insist* upon it. The adverse criticism of our opponents on this point says that we give too much attention to unessential details; and yet even this criticism wanes in validity by virtue of the ever-widening recognition of its truth and of the necessity even of individualizing *cases of disease*.

The fulfillment of Hahnemann's insistent demand for the proven drug places before us some accurate knowledge of its exact action, and the question then arises, what shall we do with it? To the homœopathist, grounded in the faith, the answer is at once plain because of his well known law. To the old school doctor it is not so.

It is true he uses the drugs, uses *our* drugs which we can rightfully claim by priority of application and by virtue of acting in accordance with the law of *similia*—uses them curatively, too; and then finds himself in the dilemma of explaining their action. Often he says they are used empirically upon the authority of some distinguished physician; mostly he denies that their action is homœopathic; at times, by circumlocution, their action is explained in verbiage which the terse phrases of a homœopathist would render quite unnecessary; and on some rare occasions, we are most devoutly thankful to say the homœopathicity of their action is frankly conceded—but then our gratitude is short-lived, for they hasten to inform us that *this* is only one of those accidental and casual occurrences in Nature which scientists tell us are impossible.

Dr. George Royal claimed that the greatest advances in old school therapeutics are due to the use of drugs of which the foregoing is true—in other words, of *our* drugs. Be that as it may, the demand of the homœopathic method that the action of drugs be carefully studied before being used upon the sick has influenced medical thought and practice in innumerable ways impossible to trace, largely because of the iniquitous practice of failing to give credit to any source savoring of the method of Hahnemann.

A recital of the drugs which have been thus *adopted* from our rich storehouse reads like a paragraph from Boenninghausen. Among them are Acon., Apis., Ars., Aur., Bell., Bry., Canth., Chamomilla, China, Glon., Hydrast., Ipec., Hep., Merc., Puls., Rhus Tox., Rumex, Podophyl., etc.

THE SINGLE REMEDY.

Just as soon as the necessity for the proven drug is recognized in any measure and for any reason, polypharmacy becomes obsolete. It is unscientific, ineffectual and wrong. If there is any consolation in the thought, let us remember

that the best old school physicians today, when they use any drugs at all, administer the single remedy. In fact the entire history of drug therapy shows that the compound prescription has steadily become simplified and has been supplanted by more pleasant pharmaceutical preparations, now containing mostly a single drug. That the practice of the homœopathic method has had a widespread and effective influence in this respect is scarcely denied by anyone.

But in what way has Hahnemann's influence extended to physicians themselves? Foremost in the answer arises for recital the fact that in the early days—yes! in the dark early days—on many occasions, men given to independent thinking, have been led to investigate this new doctrine which stirred the medical world as nothing before had ever done. Many found themselves inclined to accept it in part, and a really goodly number adopted it *in toto*. We of today can scarcely appreciate the fortitude and intellectual uprightness of these men who openly adopted the homœopathic method of practice in a bitter time when they had everything to lose in the way of professional esteem, and nothing to gain except the commendation of their own conscience. Let me assure you that such men were always splendid doctors. It has been my good fortune to have known a few.

But some physicians in former years examined the homœopathic method for the purpose of annihilating it once and for all. There have been many such instances—and almost without exception the inevitable result was the acceptance of the despised teaching. Dr. Drysdale is a notable example. When this result was not attained, in every instance there is distinct evidence that the disputant possessed knowledge of his subject ridiculously meagre. In fact, most of the controversial literature against the homœopathic method displays this pitifully dense ignorance.

But have the teachings of Hahnemann influenced physicians in the aggregate, to any material extent? Dr. Gatchell has examined this question, and his conclusions are doubtless correct. He says the dominant school has not to any extent adopted the homœopathic method in any frank and obvious way. Empirical methods prevail as ever, and the physiological school threatens to terminate in therapeutic nihilism, and already do distinguished physicians confess that medicines are mostly prescribed because the patients must have something.

In the case of those honest endeavors to try the homœopathic method which have failed to bear fruitful results, the cause is one which has a lesson for us all. It will ever be found impossible to prescribe homœopathic medicines empirically; we will obtain no constant or satisfying results either to self or to patient by giving a remedy because it is "good" for a certain disease. Whenever we examine the best medical literature of today regardless of the so-called school, we encounter that one dominating thought that we must individualize. We cannot treat a disease; we can only prescribe for the sick. We cannot treat *men*, but only *a man*. This view is recognized to be true in medicine just as in education, physical and mental; our purpose is only to be attained when we have regard for the peculiarities and requirements of the individual case, and adapt our measures in accordance therewith.

In conclusion, need I say, after this imperfect survey, that in the doctrines and practice of the homœopathic method we possess a heritage of incalculable value, and the great responsibility of being its custodians has developed upon us. It cannot be measured according to the standards of the market place—though it may lead to much gold. If the keener triumphs of the intellect appeal to you, I can say that our method has been proven to be scientific and correct by a hundred years of clinical testing, with no discovery upon the scientific horizon to invalidate its claims. But if on more exalted grounds than even these you would appraise its value, let me say that in the cause of humanity and in the alleviation of human suffering, *there is nothing* that has done *so much*, within the memory of men.

THE PASSING OF THE IDEALIST.

BY

H. L. NORTHROP, M.D., F.A.C.S., PHILADELPHIA.

(Read before the Hahnemann Club, Philadelphia.)

THIS club bears the name of Hahnemann; I am proud to be one of its members on that account. I sincerely hope the club has always been, and still is, worthy of its name, and of its patron saint. We know that many of this club's members have been champion homœopathists and on its roll of mem-

bership at the present time are the names of men who are rightfully numbered as master mechanics in the treatment of diseases and in the homœopathic prescription of the homœopathic remedy.

What a pity that homœopathy, as a distinct method of medical practice, cannot continue its existence. As an independent system of therapeutics it would be so much more distinctive, would exert a more potent effect, would possess much better prestige—it is too good to be mixed and mingled with debasing mongrel alloys. I am proud of homœopathy and am loath to see it lose one jot or tittle of its stellar brilliancy. I have seen it work therapeutic miracles, and God forbid that this means of body salvation should be swallowed up by the invasion of drug materialism, or lost in the wild chase after an ignis fatuus—a will-o'-the-wisp of medical fantasy.

But why this doleful preamble? Why such despondency? Doctor, you've got the blues! Yes, that is right, I have, for I am very much concerned about the future welfare of homœopathy. Let me explain.

When Samuel Hahnemann first promulgated the principle of similia, therapeutic chaos reigned throughout the medical world. Men's bodies were being drugged into disease and sin, and the prime object of drug application, viz., the cure of disease, was sadly thwarted. The effect of the homœopathic innovation has been world-wide and stupendous: you are well acquainted with the details of its history. It has purged out the old leaven of drug wickedness and by its subtle, positive influence has revolutionized the treatment and care of the sick. And today, notwithstanding modern research and experiment, vivisection and serum therapy, homœopathy is, to my mind, indispensable to the cure of the majority of human ills and the relief of the bulk of human suffering.

Osteopathy is good, electricity is good, hydrotherapy is good, X-ray is good, serum therapy is good—anything that will relieve suffering is good, whether that suffering be mental or physical—but homœopathy, broadly, generally speaking, is better. It is so much better than these other things that we cannot afford to relegate it to nothing but a dusty niche in the hall of fame.

I am trying not to be pessimistic, but to face the facts as I know them and to correctly interpret the signs of the times. Whatever becomes of homœopathy as a system of medical

practice, whatever good survives the vicissitudes of its checkered, waning career, one thing, to my mind, is plain: now is the time of the passing of the homœopathic idealist. He has had his day, and it is gone or, at least, is going. The college of the future will not, as the college of today does not, graduate him. Whether his professional demise is to be mourned or welcomed I will not say, but I fear if we look at it squarely and are honest with ourselves we will acknowledge that too often—too often for his own good and for that of the cause, he has been a mill-stone around the neck of the homœopathic profession and that, too, by reason of his convictions, honest and sincere without a doubt, engendering in his mind a dogged antagonism and determination which often placed him in a belligerent attitude toward his colleagues. And as a result of this, of more or less professional ostracism, he has been set aside as an extremist, an ultra-hobbyist and considered a thorn in the homœopathic side.

This, to my mind, satisfactorily explains why the homœopathic profession is a house divided against itself, and why it is sinking in the sands of its own making.

But this is only one unfortunate factor insidiously working to shipwreck the homœopathic school. The study and practice of homœopathy has its obstacles and drawbacks. One of the worst and one of the heaviest mill-stones around the neck of homœopathic progress and success is the bulky, cumbersome materia medica, difficult to learn and difficult to apply. That this statement is warranted by the facts in the case is borne out by the efforts which have been and are now being made to re-prove the materia medica. It may as well be acknowledged now that the new materia medica, if we ever have one, will be for the new generation of homœopaths, since the men of the present day who have been trained under the old law of symptom value and true significance will not relinquish what to them is the "true and the tried" for what they are afraid has a savor of unreliability about it. My feeling on this score makes me skeptical, therefore, of the success of any series of re-provings: it is a confession that the present-day materia medica is fallacious, and that we must virtually go back to the beginning and commence all over again. To my mind this is humiliating, and the result cannot but be problematical.

Again, what a pity that our school contains such a paucity

of authors; how few works are brought out by homœopathic writers. Does any member of this club believe that the homœopathic journals of the land are flourishing? Is the *HAHNEMANNIAN MONTHLY*, for example, maintaining a reputation which should be the pride of its editors and subscribers, and is the fact that it has never been, and is not now, a financial success the fault of the editorial staff, or because the average homœopath is so busy studying his *materia medica* to find the *similimum* that he has not the time to add to the literature of his school?

Of course, it is discouraging to any public man to be snubbed professionally and politically. He loses heart; no matter what his convictions, the time comes when he is bound to feel that, after all, he has made a mistake and is on the losing side. Yet this has been the experience of many homœopaths from the very beginning; from the time of Hahnemann he has suffered ridicule and social, political and professional excommunication. The untoward effect of this upon the school's scientific and material progress has not been, I believe, fully weighed.

It has been woefully apparent to me that the homœopath is almost invariably on the defensive; he seldom has opportunity to lead an attack and to be aggressive. On the contrary, he has had to conserve his strategy and prowess and defend, as best he could, his scientific inheritance. This much of his time has been spent (I won't say wasted) by proving to a skeptical profession and laity the real virtues of the cause of his adoption. This has been necessary and has made his fight all the harder and his task the more arduous.

Another glaring fault that has condemned the homœopathic idealist has been his dogged adherence to internal prescriptions and his depreciation of everything external, local, surgical, etc. In other words, he is criticized by his more liberal-minded brethren and is looked upon as being hide-bound and an extremist. He stands in his own light.

I have endeavored to call your attention to the more prominent criticisms of the homœopathic school within its ranks. These, and others, are, to my mind, responsible for some of our failure to make more satisfactory progress. The saddest commentary of all is that these faults are more or less universal in the profession and are irremediable.

Potent outside influences have been working for many

years against homeopathic unification and success, with the result that our men have been driven back in their efforts to be public spirited or to hold political positions. We have been snubbed, insulted, and spat upon by our allopathic brethren until we (some of us) have lost all self-respect and, in desperation, have joined old-school societies.

Of course, our colleges have suffered, too. Why not? How many young men have been deterred from studying homeopathy because of the stigma placed upon members of its school? Probably many.

I feel, therefore, that the homeopathic idealist is passing from view. I believe that homeopathy as a distinct system of medical practice has seen its zenith and now its star is waning in brilliancy.

But I will say no more. Gentlemen, I have merely told the truth, as I know it.

THE INFECTIOUS DIARRHOEAS OF INFANCY.

BY

C. S. RAUE, M.D.

(Read before the County Homœopathic Medical Society of Philadelphia, June 13, 1918.)

THE term "Infectious Diarrhoea" in its restricted sense applies to those acute intestinal disturbances which can be traced directly to the action of bacteria or their toxins upon the mucous membrane of the intestine with resulting inflammatory reaction, diarrhoea, fever and toxemia. In this respect they differ specifically from simple diarrhoea, or dyspepsia; a purely functional or physiological disturbance without inflammatory reaction in the gut and toxic manifestations.

The infectious nature of inflammatory diarrhoea, in every instance, however, has not been established. With the exception of the cases of acute ileocolitis presenting characteristic dysenteric symptoms and in which the bacillus dysenteriae can be found in the stools, no other type of enteritis in infancy has been proven to be due to a specific organism. It is true, an enteritis may result from infection of the alimentary tract with bacteria which are capable of setting up local inflammation in other mucous membranes, namely, the nose and throat or bronchi and it is not at all improbable that streptococci, the pneumococcus and the influenza bacillus occasionally induce an

enteritis. Such infections, however, are most common in winter, a time when enteritis is rare. Streptococci are frequently found in the walls of the intestines in fatal cases, but are most likely secondary invaders.

It is quite possible that an excessive number of bacteria, not necessarily pathogenic, either in the food or developing in the intestinal tract as a result of lowered vitality and dyspeptic conditions, may set up an inflammatory reaction. This can result either from the action of bacterial toxins, or from the irritating and toxic effects of products of bacterial decomposition of the intestinal contents. Absorption of these toxic products explains the associated fever and toxemia.

Whether such bacteria as the gas bacillus of Welch and the bacillus pyocyaneus play an active role in the cases in which they can be demonstrated in the stools, or are purely accidental has not yet been definitely decided. At the present time no evidence is forthcoming to prove that they are pathogenic.

Infantile diarrhoea is so distinctly a disease of hot weather that the effects of prolonged heat and humidity upon the infant's metabolism and digestion is now almost universally accepted by pediatricists as the primary cause of the intestinal disturbances embraced by the term "infectious diarrhoea." Cases of dysentery bacillus infection may be excluded from this category.

Finkelstein advanced the theory that the diarrhoea and accompanying toxic symptoms resulted from the injurious effect of the sugar in the food, in a child whose intestinal mucosa had been injured by previous attacks of dyspepsia and whose vitality had been depressed by hot weather. The sugar is absorbed directly into the circulation, producing pyrexia and intoxication, and can be demonstrated in the urine. A high fat content of the food favors the development of this "Alimentary Intoxication." The salts of whey have also been shown to produce pyrexia and diarrhoea. Czerny and Keller attributed the toxic manifestations to the bacterial decomposition of the food either before ingestion or later in the intestinal tract. They believed the toxic substance to be derived from the fat in the food, this being split into lower fatty acids. The local action of these noxious substances results in an enteritis, while their absorption into the circulation, in conjunction with the depleting effect of the diarrhoea, may induce an

acidosis. Some of the symptoms which were formerly looked upon as toxic manifestations are now recognized as being due to acidosis.

The work of Vaughan with protein split products and his discovery of a protein poison common to all proteins whether bacterial or food-proteins, has shed much light upon the pathogenesis of fever and other symptoms of infection. Some of these observations seem to fit in well with the clinical manifestations of infectious diarrhoea.

In the first place, through incomplete digestion, a protein may be absorbed into the circulation as a peptone, the stage of digestion at which a protein becomes poisonous (Vaughan). Secondly, undigested protein may be absorbed from the alimentary tract, in dyspeptic conditions, and the child become sensitized to the foreign protein. This may be facilitated by the effect of excessive heat upon the infant's vitality and digestion and in this way some cases of *cholera infantum* might be explained. The fact that sugar is found in the urine as pointed out by Finkelstein does not weigh against this theory because albumin is also frequently present in the urine and the blood shows a pronounced leucocytosis.

Bacteria, whether pathogenic or non-pathogenic, can split the proteins of the milk and probably render them absorbable without complete digestion, with resulting acute gastrointestinal symptoms of sudden onset after taking "spoiled milk." These cases are commonly designated *acute milk infection*.

Food—The importance of food as an etiologic factor is only secondary to that of temperature and humidity. Children that are exclusively breast-fed rarely develop enteritis. The fact that an infant is breast-fed does not exclude the possibility of its being infected if the nipples are not kept clean or if they are fissured. Again, ordinary filth and the drinking of contaminated water may be the source of infection. The vast majority of cases occur in infants that are artificially fed and whose food, both as to the quality of the milk and the proper modification of the same, is decidedly below standard. It is always a safer plan to use pasteurized milk in the summer. Cold weather seems to give a surprising immunity of diarrhoeal affections even when the quality of the milk is none too good. The investigation of Holt and Park (*Archives of Pediatrics*, Dec., 1903), into this subject has shown the rather

startling fact that despite the large number of bacteria that were found in many samples of milk fed to infants in the winter there was a remarkable tolerance for the same on the part of these infants. The practice of boiling milk and using pasteurized milk, now becoming more general among all classes, has done much toward reducing the infantile death-rate during the summer months.

The environment is an important factor. Fresh air and personal cleanliness are two of the strongest prophylactic measures in infantile diarrhoea and when infants are kept in squalid, poorly ventilated or crowded quarters and not regularly bathed they offer poor resistance against an intestinal infection.

Intestinal indigestion predisposes to the development of an infectious diarrhoea. All dyspeptic conditions should, therefore, receive prompt attention.

PATHOLOGY—Both local and general pathological changes can be demonstrated in fatal cases. The body is emaciated in appearance due to the great loss of weight from demineralization of the tissues with consequent loss of water. Metabolic disturbances frequently demonstrable during life are sugar, acetone and diacetic acid in the urine and increased urinary ammonia. Albuminuria due to acute parenchymatous degeneration of the kidneys is common. The blood shows a leucocytosis.

The liver is enlarged due to fatty changes. Parenchymatous degeneration may be present. The lungs show hypostatic congestion and a secondary broncho-pneumonia is common.

In rapidly fatal cases of cholera infantum the gut may show no gross lesions but microscopic examination will reveal degenerative changes in the epithelial cells of the superficial layers of the intestinal mucosa. Typical cases of catarrhal gastro enteritis present acute inflammatory reaction in the gastrointestinal mucosa. The mucous membrane is congested and covered with mucous. The lymph follicles are swollen but not as markedly as in cases of ileocolitis due to dysentery bacillus infection. In protracted cases irregular superficial ulcers form on the intestinal mucosa.

SYMPTOMS—The symptoms of infectious diarrhoea will naturally vary with the physical condition of the infant at the time it is attacked and the severity of the pathological process active in the intestine. Cases of true dysentery bacillus infec-

tion (ileocolitis) present a characteristic train of symptoms and specific pathological changes in the gut.

A typical case of enteritis usually begins with vomiting, fever, colicky pains and dyspeptic stools. The abdomen is distended with gas and in the beginning the stools are acid and contain curds until the bowels have been thoroughly emptied. If no change is made in the diet at this time the acrid character of the stools persists and the buttox becomes excoriated. When milk, however, is promptly withdrawn and carbohydrates are also withheld, then the fermentative changes in the gut are replaced by putrefaction and the stool becomes offensive and alkaline in reaction.

Associated symptoms are fever, prostration, gastric irritability and rapid loss of weight. A leucocytosis is usually present and albumin may be found in the urine. Restlessness, nervous irritability, or drowsiness and collapsic symptoms may develop. In the more severe forms, serious symptoms of intoxication develop and sugar may be found in the urine.

As the condition advances the stools become more frequent and watery, the odor is putrid and mucous is present in appreciable amounts. The color is either yellow or green; acid stools are more likely to be yellow while alkaline stools are green or promptly turn green on exposure to the air. Gas is passed freely with the stools. This is usually formed from the carbohydrates which are being rapidly fermented by the abnormal bacterial activity in the gut. Kendall has shown that the colon bacillus is a facultative organism capable of inducing either putrefactive or fermentative changes depending upon the nature of the medium in which it is growing. In symbiosis with the bacillus subtilis it is capable of generating large amounts of gas even in a protein medium.

The duration depends to a large extent upon the prompt rational treatment and also upon the child's physical condition at the time of onset of the attack. It will also be influenced largely by the severity of the initial symptoms. Many cases can undoubtedly be aborted. The prompt disappearance of alarming general symptoms together with the vomiting and diarrhoea which frequently follows upon the early institution of a starvation diet and purgation or bowel irrigation, has convinced many pediatricists that these cases are purely toxic and not infectious in nature. While this is undoubtedly true in some instances, still there is a large percentage of cases

which run their course, similar to any other infection, in spite of the above mentioned treatment.

Cases that have gotten well under way before the offending food has been discontinued, or whose intestinal mucosa has been damaged by previous dyspeptic conditions may continue to have watery stools with mucous and run a temperature for an indefinite period. In these instances bacteria have very likely penetrated the intestinal mucosa and have also been carried into the general circulation. It may, therefore, be stated that in the average case the fever will last from two to three days, provided the child receives prompt treatment and its physical condition before the attack was favorable. The diarrhoea may, however, last longer and a tendency to relapse often exist for some time, necessitating great caution in the feeding of these cases. If the infant's condition was poor previous to the attack the reparative process will require a longer time and fever and diarrhoea may persist for a week or two. A persisting fever is a grave prognostic omen as it usually signifies a secondary infection or a complication such as bronchopneumonia.

CHOLERA INFANTUM—is a hyperacute type of gastroenteritis, usually occurring in infants with previous intestinal disturbances and is rarely seen excepting during extreme hot spells. In some cases it may be due to an *acute milk infection*, or it may be possibly a form of heat stroke.

The symptoms described by Finkelstein as *acute alimentary intoxication* are due to the development of an *acidosis* as pointed out by Howland. The child becomes drowsy and is only semi-conscious. When aroused it looks about with a fixed vacant stare. The respirations are deep and rapid, due to air hunger, and may suggest pneumonia. The urine contains acetone and diacetic acid and may show traces of sugar. The prognosis in cholera infantum and in acidosis is always grave.

DIAGNOSIS—In the beginning of a case of infectious diarrhoea it is not always possible to determine whether we are dealing with a primary gastrointestinal condition or whether the diarrhoea and vomiting are symptomatic of some acute infectious disease such as grip or pneumonia. During hot weather, however, this question rarely arises. A fever and diarrhoea that does not promptly show signs of abating under

appropriate treatment is not likely to be a primary gastrointestinal affection.

The severe nervous disturbances encountered in cholera infantum and in acidosis may suggest meningitis. The severe diarrhoea, however, and the improvement of the symptoms under treatment directed to the intestinal condition should rule out meningitis. When a case of enteritis presents a continued fever, some complications such as otitis, bronchopneumonia and pyelitis should be looked for.

TREATMENT—The first and most important factor in the treatment of infectious diarrhoeas is *prophylaxis*. This begins with the care of the child, especially during hot weather. Over-dressing must be avoided and the child should receive an abundance of fresh air. The feeding must be intelligently supervised and all attacks of dyspepsia should receive prompt attention.

The intestinal discharges should be disinfected as not infrequently diarrhoea becomes epidemic in a family or hospital ward.

The supervision of the food is of the utmost importance. Use only pure, clean milk. Boil the water you give the babe. Pasteurization will not make dirty milk wholesome. If chemical changes have occurred in the milk, sterilization will not prevent it from acting as a poison. During hot weather the food should be pasteurized directly in the feeding bottles. Another important point in prophylaxis is not to wean an infant during the summer. There are times when this becomes necessary, but whenever at all possible we should wait for the advent of cool weather before taking this step.

Prophylaxis, therefore, resolves itself into regulating the child's surroundings and rigorously attending to every detail of feeding. In summer no infant should be kept in the city if the parents can afford to take it away. The country is good; the seashore is better. Even after the infant is seized with enteritis it is not too late to take it out of the city, and its recovery may depend upon this step.

Bathing is most essential during hot weather. The cool or tepid bath is absolutely necessary when fever is present, and it may be given three to four times a day. Chapin recommends allowing the children to play in a bath tub partly filled with lukewarm water.

The nipples should be boiled every day and the bottles

filled with hot water and washing soda as soon as emptied. Finally, before refilling they should be cleansed with a bottle-brush and thoroughly rinsed in hot water.

When maternal feeding is practiced, the nipples should be washed before and after nursing with a saturated solution of boric acid. The infant should not nurse directly from a fissured nipple: it is better to employ a sterilized shield or pump out the milk and feed it with a spoon. These methods are preferable to attempting to cleanse the infant's mouth after nursing.

In hot weather infants get thirsty between feeding times, and should receive an ounce or two of water, previously boiled and then cooled.

A most important point to bear in mind, is that during hot weather an infant cannot take as strong a milk mixture as during cold weather. It will usually take the same quantity because it is thirsty, but unless we cut down the fat and sugar, we invite indigestion. Do not expect an infant to gain steadily during July and August.

When diarrhoea develops we must at once make appropriate changes in the feeding. In a breast-fed infant, in the absence of fever and vomiting, we may for a day or two continue with the breast milk, but lengthen the interval between nursings. Should the condition not improve it will be wise to alternate a bottle of barley-water with the breast and in that way give the digestive organs a rest. Should the condition get progressively worse in spite of this, we must stop the breast entirely.

The reason milk is discontinued in diarrhoea of infants, is because it acts as a good culture medium for the intestinal bacteria. According to Finkelstein it is especially the lactose and the salts of whey, which are the offending elements. On the other hand the casein of the milk, largely on account of its high calcium content, seems to exert an inhibitory effect upon the fermentative changes present in the gut in the majority of the cases of summer diarrhoea and it is on the basis of this theory that he so successfully used his "Eiweissmilch," or albumin-milk, as a routine diet for infantile diarrhoea.

The chief need of the organism during the first twenty-four hours of the illness is water and not food. This should be plentifully supplied in the form of plain boiled water, barley-water or weak tea. If the infant refuses to take these

drinks freely, they may be sweetened by the addition of a grain of saccharine to the pint. The bowels should be thoroughly flushed with a high enema of normal salt solution and this may be repeated according to indications.

On the second day, lamb or chicken broth, cooked with rice or barley, strained and then cooled in order to remove the fat, may be given in quantities slightly less than the infant was taking before its illness and at four hours' intervals: water being given between feedings.

On the third day, if the fever has subsided and all curds have disappeared from the stools, we may cautiously begin with a milk preparation, preferably albumin milk. The beneficial action of this food in diarrhoea is largely due to its high protein and calcium content, which favors the formation of soap stools in the intestine. Peristalsis is thereby checked and diarrhoea overcome. The presence of buttermilk in this food may also exert a beneficial effect through the antagonistic action of the lactic acid bacillus to the gas bacillus and colon group.

It is not always possible to employ albumin milk because of the skill and care required in its preparation. As a routine measure I have found the use of dilute skimmed milk preparations highly practicable and generally successful. We should begin with one part skimmed milk to three parts barley-water, rice-water or arrowroot-water, mixed and boiled for five minutes.

The proportion of milk may be cautiously increased until two parts milk to one of diluent is reached. With this food the stools usually become yellowish, salve-like and alkaline in reaction. When this result is attained one of the maltose preparations may be cautiously added to the food. We should do the same thing when feeding albumin milk, for without a sufficient amount of carbohydrate in the food, the infant soon becomes seriously emaciated. A gradual return to whole milk should be made after the diarrhoea and fever have been definitely controlled, but the milk should be boiled for a period at least of several weeks after an attack of enteritis.

In ileocolitis, or dysentery, Kendall recommends the use of lactose on account of its antagonistic action to the dysentery bacillus. Cases of ileocolitis are often starved entirely too long and thus unnecessarily weakened. We should remember that the lower bowel is involved in these cases and

that properly modified milk and thin gruels are well digested before they reach the inflamed colon. In ileocolitis it is common to find several mucous stools in succession, followed by a pasty milk stool. Albumin milk or boiled skimmed milk mixtures are usually well tolerated.

SPECIAL SYMPTOMS AND THEIR MANAGEMENT—Vomiting is at times a most troublesome complication, especially in cholera infantum. Lavage of the stomach is the most rational and successful method of treatment to control it. In urgent cases it may be necessary to perform the operation several times a day, and then pour a little food into the stomach before removing the tube. Arrowroot-water or albumin-water is best retained under these circumstances.

Often the food will be retained better if fed with a teaspoon than when taken from a bottle. When the infant can take only a small quantity of food at a time, we must feed it often.

DIARRHOEA—In the early stages of an intestinal infection we will derive much benefit from bowel irrigation. The gut seldom empties itself thoroughly, for which reason the diarrhoea and toxic symptoms persist. It is true, the irrigating fluid does not reach beyond the ilea-caecal valve, but, as the colon receives the brunt of the attack in most instances, we help the case materially by cleansing this part of the gut. Besides, irrigation stimulates peristalsis, and thus aids in emptying the portion of the gut above this point.

Persistence of mucous in the stools calls for irrigation, but we must stop this procedure as soon as the bowel begins to empty itself naturally. Many a diarrhoea is kept up by too much mechanical interference.

When tenesmus is persistent we can give the child much relief by injecting a small amount of olive oil into the rectum. This exerts a soothing influence upon the inflamed membrane.

High fever is best controlled with the bath. Infants may be tubbed two or three times daily in water gradually reduced from 90 degrees F. to 80 degrees F., while older children are more conveniently sponged with cold water and alcohol. Irrigation also tends to control the pyrexia. The child should be kept in the open air as much as possible.

Collapse calls for stimulation. Brandy should only be used when needed, and not given continuously during the illness. In grave cases a hypodermic injection of camphorated oil may be

necessary. Five mms. may be given to an infant one year old. Camphor suits this condition admirably, and it is best given hypodermically, as it may otherwise irritate the stomach. Most cases of cholera infantum will need it sooner or later. Artificial heat may be applied also when the body surface becomes cold or the temperature subnormal. When the infant has been rapidly depleted by frequent watery stools hypodermoclysis may be resorted to. From fifty to one hundred cubic centimetres of normal salt solution may be injected subcutaneously with a large sized Luer Syringe. In case of *acidosis*, Howland recommends fifty cubic centimetres of a 4 per cent. solution of sodium bicarbonate subcutaneously.

REMEDIES—The diarrhoea accompanying teething is especially benefitted by *Chamomilla*. In acute gastro-intestinal intoxication *Belladonna* appears most frequently indicated on account of the predominance of fever and nervous symptoms. Even in the later stages, when the bowel symptoms become prominent, I have found *Belladonna* invaluable as long as fever and toxemia were present.

In the ordinary case of fermental diarrhoea and ileocolitis, I find *Podophyllum* 3 x, a good routine remedy. *Mercurius vivus*, 3 x trit. follows, if ulceration takes place. This is indicated by the continuance of the diarrhoea, moderate fever and abundant mucous in the stools. In the dysenteric type of colitis, *Mercurius corrosivus* 6x is the chief remedy.

Arsenicum, *Ipecac* and *Veratrum album* are the most useful remedies in cholera infantum. *Veratrum* was Jousset's favorite. *Iris versicolor* will check the vomiting speedily, but leaves the bowels untouched according to Richard Hughes. *Arsenic* and *Veratrum* are often difficult to differentiate, especially in the beginning of the case. Under these circumstances there is no objection to alternating them. I have often found that when one of the apparently indicated remedies failed to act, prompt improvement followed on giving a constitutional remedy in alternation. Among these *Calc. phos.* stands foremost.

VALUE OF THE SUBJECTIVE SYMPTOMS IN AURAL DIAGNOSIS.

BY

GILBERT J. VALEN, A.B., M.D., F.A.C.S.

If the subjective symptoms of a series of aural cases are recorded and studied it will be found that there are a few symptoms which are characteristic of aural conditions, one or more of these being found in every case.

It is the author's experience that the value of these symptoms from a diagnostic and prognostic standpoint is not well understood, nor are the symptoms sufficiently studied. If they are carefully analyzed as to their occurrence, their aggravations or ameliorations and their association with other symptoms, they become often of great value in diagnosis and prognosis.

1. *Pain* occurs in all acute inflammatory conditions of the external ear, the middle ear, the mastoid process and also reflexly from carious teeth, ulcers of the pharynx, acute tonsillitis, etc.

Given a patient with pain we should determine whether it comes on gradually or rapidly, how it is aggravated or relieved, whether it is constant or intermittent.

The pain of acute inflammatory conditions of the external auditory canal has very distinct characteristics. It comes on gradually with increasing severity, it is aggravated by motion of the jaw as in chewing, by traction of the auricle, by the slightest touching of the auricle, it is referred usually superior to the ear and is constant. If the patient is lying down he will lie upon the other ear.

The pain of a middle ear inflammation lacks all of the above aggravations, the patient will lie by preference upon the diseased ear; the pain is aggravated by swallowing, belching, sneezing or any act which tends to inflate the ear through the eustachian tube. It is not uncommon for those patients to have hours free from all pain, especially is this so in children who may go through the day without pain, then the pain will commence again, with renewed severity, at night.

In children the eustachian tube is wide and short and it is likely that the intermission of the pain is due to the fact that

the secretion finds its way into the naso-pharynx and so relieves tension for a time.

The pain of a mastoid condition, is preceded almost invariably by a history of middle ear involvement with aural discharge; the pain is referred posterior to the ear and is constant and often accompanied by tenderness at some point over the mastoid.

A deep furuncle in the posterior wall of the external auditory canal may present objectively the appearance of an advanced case of mastoiditis, with post auricular oedema and prominence of the auricle. The author has had many similar cases referred to him for a mastoid operation. In such cases the aggravation of the pain was usually sufficient to diagnose the condition.

Pain accompanied by dull hearing occurs with external otitis and with otitis media. In the first case the dullness of hearing is due to a mechanical closure of the canal, in the second case to the presence of secretion in the middle ear cavity.

The character of the pain will clear up the diagnosis.

2. *A stuffy full feeling in the ear or a stopped up feeling*, is a common one in ear conditions. These patients press the finger in the ear for relief. The symptoms place the condition as one of the external auditory canal (cerumen and epithelial plug) or in the eustachian tube (tubal catarrh). With this symptom there is often associated a feeling of numbness about the ear and in case of eustachian catarrh at times a sensation as if the voice was rumbling in the ear (autophony).

3. *Sensation of something crawling in the ear* is often due to fluid in the middle ear cavity.

4. *Dull hearing*; may occur as a symptom of a variety of aural affections. Carefully studied as to its occurrence with other symptoms, its ameliorations and aggravations, this is of great value as an aid in locating the lesion, and also an aid in prognosis.

Dull hearing coming on rapidly, with no other symptoms than the stuffy feeling in the ear or numbness about the ear, is due to either a condition of the external auditory canal, or the middle ear.

Coming on rapidly with nausea, vomiting, disturbance of the equilibrium it indicates a labyrinthine lesion. Dull hearing which has come on gradually is usually due to a middle ear

catarrh. Better in a noise; indicates ankylosis of the ossicles. Better at times; the early stages of a catarrhal middle ear disease. Worse in temperature changes, as in going from cold to warm room: vaso-motor disturbance in the eustachian tube. Better in certain positions of the head: secretion in middle cavity, or polypii, which in certain positions are removed from pressing upon the ossicles.

THE EVOLUTION OF ULTRA VIOLET RAYS IN THE TREATMENT OF SKIN DISEASES.

BY

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It is a well known fact that the Egyptians treated their patients by exposure to the sun. As early as the first century and then not until the tenth the sun's rays were made use of in the treatment of certain diseases, both systemic and local, and was just as frequently entirely discarded.

Certain it is that light was used from time to time for therapeutic purposes by the ancients and was greatly appreciated, particularly by the Romans who were well aware of the beneficial effects of what was known as the "sun bath."

There is no doubt that they did not have the true conception as to the benefits received from such treatment, believing that the results were obtained from the warmth of the sun's rays rather than from the chemical effect upon the system.

To Finsen belongs the credit for having utilized light in the proper manner for its therapeutic effects. Practically all that was written before the time of Finsen belonged to the metaphysical realms. The knowledge as to the effects of sunlight before the time of Finsen was simply one of general stimulative effect upon the whole organism, it being taken for granted that the entire effect was beneficial.

Finsen based his deductions upon an entirely different hypothesis and that is upon the destructive action of sun-light upon the human being. His first observations were not of a helpful character because he inadvertently advised the non-use of the chemical rays of the sun in patients suffering from smallpox. These rays he called the "harmful" rays.

His object was to have the patient in a room in which only the red rays of light were allowed to penetrate, which rays were known to have only the slightest chemical action. This was brought about by having the rays from the sun pass through red colored glass which caused all of the rays from the sun to be absorbed but the red rays.

While the therapeutic application of the rays of the sun to the body in general was practiced by those of ancient times without their action being understood, we are in a position today to understand more or less their exact worth and method of action.

We believe in this modern age of ours that life belongs to light in its chemical action on one side and death to darkness on the other side. Frequently the wonderful improvement in patients suffering with psoriasis is to be seen after exposure of their bodies to the sun-light for protracted periods of time at the seashore.

Light is important to longevity and without it life in the human or animal species cannot exist, and certain it is that the chemical rays are absolutely necessary for existence.

It is also a well-known fact that certain rays of the sun are deleterious to the human economy, and science has as well demonstrated that there are certain rays emanating from the sun which are a decidedly beneficial and curative agent to diseased states. Science has also demonstrated that it is the ultra violet rays which are responsible.

The Greeks and Romans in early times, in order to maintain bodily health, exposed their naked bodies to the sun. Cicero, as well as the younger Pliny, spoke of "sunning places" upon the roofs and in the gardens, and there were as well solariums in the dwellings. Little did they know that it was the ultra violet rays which were responsible for the therapeutic effects.

Herodotus, in his early day, recognized the stimulating qualities and power of light therapy, both as a prophylaxis against disease and in bringing about recuperation after illness.

Antyllus was of the idea that it would annihilate dropsy, and commenting upon it in the treatment of hysteria, hypochondriasis and certain other nervous affections. Aurelinus advised the sun's rays in certain pathological states including arthritis, cachexia and obesity.

The Romans at that time had no conception of the action of light rays. It was not even known in those days that the sun was the source of light. It was observed by Herodotus that unless the bowels were profusely moved that the solar rays might have a deleterious effect upon the head.

Really one of the first evidences of recent times of an attempt to revive the therapy of light after centuries of relegation to the past was the University of Göttingen which in 1796 offered a prize for the most able essay on the effect of light upon the human body.

As time went on it was demonstrated that sunlight had an inhibitory effect upon the life of certain bacteria. The chemical action, however, at that time was not understood. Even in those days pulmonary diseases, tuberculosis of the bones and joints, and of the skin were improved.

In the early days it was particularly noted that sun baths were of especial value in defects of metabolism, and it was even then noted that the sun's rays were beneficial in certain types of diseases of the skin. It was also mentioned that they exerted a beneficial influence in psoriasis, in eczema, and in acne, and that holds good even today, particularly in locations which are high, and the ultra violet rays are not interfered with in penetrating to the earth's surface by the various gaseous strata which surround the earth.

The old-time country practitioner still uses the magnifying glass which he concentrates upon localized diseased states for its therapeutic effects and with good results and upon which he swears.

The solarium as has been used in the past by the ancients is even still used today. The patient in the nude state sports about either in the open or in glass enclosures or on roof tops.

Today, as in the days of the past, exposures to the sun's rays were measured by the strength and power of resistance of the patient—the sensitiveness of the patient's skin as whether they were light or dark complexioned.

In days gone by they varied the times of exposure from half an hour to an hour for those who were delicate, and to several hours for those more robust and dark complexioned.

They also varied the exposures according to the latitude—the higher the altitude the less the exposure; and in our modern knowledge of the subject, it is well known that the higher the altitude and the rarer the atmosphere, the more

powerful are the actinic or ultra violet rays which, after all, are the real curative or therapeutic rays which are given forth by the sun.

Even in days gone by, physicians directed their patients to accept the seashore as an ideal place to obtain full benefit from the sun bath, because here they had the combined advantage of the action of the sun's rays and the sand bath, which is not unlike the mud baths which are given in our modern days.

After all, it was left to Finsen to separate the various rays and to exclude those which had dangerous effects, and to retain those which gave therapeutical results.

It was left to Finsen to reduce the heat producing rays to a minimum.

THE ARC LIGHT IN THE EVOLUTION OF ULTRA VIOLET RAYS AS A THERAPEUTIC MEASURE.

The evolution of ultra violet rays as a therapeutic measure as well belongs to the ordinary street arc light. Garnault it was, who mentions the radiations from an arc light as the accidental cure of a disease observed by a certain workman, by the name of Touré, who was afflicted with rheumatism and who was entirely cured because his work necessitated remaining in close approximation to an arc light of great intensity; and it was subsequently found that workmen associated with him, who likewise had to remain in the vicinity of this powerful light, were cured of such systemic diseases as rheumatism and gout.

It is well known that the ordinary arc light with the carbon electrodes, which is used for the purpose of producing light, has certain effects which are similar to the sun's rays regarding inflammation of the skin, consequent erythema and increased pigmentation.

In the evolution of light therapy it was found that the arc light was used as a substitute for the sun bath with the hopes of producing a similitude.

Going back to 1880, certain experiments were developed at the Cornell University which went to show the favorable influence which the arc light had on plant growth. At about that time the arc light was much used in therapeutics, a cabinet having been arranged so that the head was not enclosed,

and certain colored screens were interposed between the patient and the light when it was found necessary to intercept the heat rays.

This was necessary so as to prevent what was known as "erythema electricum." This was demonstrated by Widmark, Charcot, and others, to be due to the actinic rays which were put forth by the arc light.

In those days the arc light was presumed to simulate sun light more closely in its luminous and chemical power than any other known therapeutic agent; but today we have more efficient apparatus in the Kromayer and Heraeus lamps which have left the combined total of Finsen's efforts entirely in the background.

Even then it was found that exposure to the powerful rays of the arc light would cause the patient to suffer from "burning" of the skin not unlike sunburn, and even inflammation of the conjunctiva, also choriza and photophobia.

It was found with the arc light that the growth of tubercle bacilli were inhibited, and even then the patient's general individuality was not left out of consideration.

They employed all means to increase the patient's resisting powers, and so it is today with the use of the quartz mercury vapor lamps.

Freudenthal believed that while he never really cured a case of tuberculosis of the lungs with the use of the arc light, it was nevertheless a valuable treatment for this disease. He believed that the tegumentary covering of the chest was stimulated to greater activity, thereby increasing nutrition and improving general metabolism.

He also noticed that cases which were treated by the arc light had a gradual reduction in temperature, and he claimed then, in comparing it to treatment by hydrotherapy, that it was superior in more promptly relieving pain and in assisting expectoration.

Freudenthal, who had considerable experience in the treatment of tuberculosis with emanations from the arc light, found that it was of the utmost value in relieving symptoms in a very short period of time.

He also found that the arc light was of value in the treatment of ulcerative tuberculous processes, and in those conditions was far superior to any other means which were at hand.

He then used the arc light which was commonly used on shipboard, known as a "search light."

Crude as the methods were then, he used pieces of lint which were kept cold by keeping them on ice to prevent heat radiation, and as they were gradually warmed by the effects of the light rays, they were renewed.

In certain cases he used a screen of blue glass at the beginning of treatment until the patient had gradually become accustomed to the effects of the arc light.

We next come to the mercury arc light known as the "Hewitt" light. It was fourteen years ago when Peter Cooper Hewitt, among the most prominent discoverers of that time, referred to light as a therapeutic agent. This lamp consisted of a vacuum containing mercury vapor, and it is upon this discovery practically that the modern quartz mercury vapor lamps of the Kromayer and Heraeus types are based.

In the Hewitt mercury arc light the vapor opposed a decided resistance to the passage of the electrical current until it reached a certain high potential, when it suddenly gave way and allowed to pass through it a low potential current. This then produced a light which gave out all rays excepting the red. The energy was therefore converted into chemical and luminous rays, while the heat rays were practically excluded. This was a decided advance in phototherapy.

Sun-light, as a therapeutic agent, has been abandoned by the modernist as a source of light upon which he could depend absolutely and without interference for actinic rays. Of course, certain of the old type country practitioners in the mountainous regions still rely on the sun-light, and for this we must give them credit.

We, in this location on the earth's circumference, have relegated it because of certain atmospheric influences and because the earth is surrounded by vapor and smoke and certain chemical constituents which prevent the curative or ultra violet rays from reaching the earth's surface. In our location there are but very few places where the sun could be depended upon to send its ultra violet rays upon terra firma. This was agreed upon even in the days of the electric arc light, it being then supposed that the arc light was particularly rich in ultra violet rays.

We must realize that the sun's rays are obliged to pass through various gases which surround the earth and have a

wonderful absorptive influence upon the ultra violet rays, it being only the red rays which are allowed to pass through this strata, and they are the heat rays.

These various strata are recognized in the spectrum by the appearance of numbers of absorption lines or black points. Each line represents a portion of the spectrum that has been absorbed from the light of the sun in its totality by something through which it has to pass on its way to the earth.

Four thousand lines and more have been mapped out in the spectrum, and, no doubt, by this time many more have been added through careful observation.

This will make us realize that the sun ray as it reaches the earth is after all not so rich in its chemical properties as we might believe, therefore making us depend all the more upon artificial sources for the therapeutic rays which the sun gives forth, namely, the ultra violet rays, so admirably supplied by the quartz mercury vapor lamps of the Kromayer and Heraeus types.

It has long been known that the ultra violet rays from an electric arc light were much richer than those produced by the sun, and as the sun-light can only be used in high altitudes for its chemical effect, we in this region must depend upon an artificial production of these rays, and as the artificial production is even much richer in ultra violet rays than the sun could possibly produce in our locality, it is therefore obvious that we should not be much concerned about the sun.

REASONS FOR THE DISAPPEARANCE OF THE USE OF THE SUN'S RAYS AS A THERAPEUTIC AGENT.

The evil effects which have followed the unscientific technique which has been employed from time to time, a typical example of which is the "glacial burn"—an acute dermatitis which in the majority of cases occurs after exposure to intense rays of the sun in high altitudes, sun baths, etc., was responsible for its long disappearance from the therapeutic field.

These phenomena were for a long time looked upon as the evil effects following exposure to the sun's rays, and even Kaposi was of the opinion that it was the heat rays and not the light or chemical rays which produced the burn.

This theory is contradicted by Hammer, whose experience demonstrated that just the reverse is true—that is, that

it is the light rays and not the heat rays which provoke the inflammation.

Hammer's experiments were followed by those of Widmark and more conclusively by Finsen. Upon these experiments was laid the foundation of light therapy as inaugurated by Finsen, and it has been sometime since Rollier and Bernhardt firmly established the position of heliotherapy by the publication of their remarkable results with natural sun-light at high altitudes.

It was early recognized that the good effects of sun-light was not so much due to the red or heat rays as to the cold violet and ultra violet rays of short wave length; but as these latter rays are only available in high altitudes above the vapor zones, and as the sun-light is not always to be had in any desired intensity, the value of an artificial source of light which could be properly regulated is readily understandable and its advantages were recognized by many of the early investigators.

Finsen, after years of experimentation with the natural sun-light, found the carbon arc to be a light rich in blue, violet and ultra violet rays. He was also the first to devise a way of removing all heat waves from the light, thus making it possible to use pressure upon the tissues for the purpose of securing deep penetration of the rays.

Thus, while all progress in light therapy must be credited as originating from the experiments of Finsen, it has remained for others to perfect the apparatus or lamps designed or constructed under his directions, not only extremely complicated, as these lamps have proved, but very expensive and uneconomical from the standpoint of current consumed.

The next important step which, however, was preceaded by the unsuccessful appearance of the iron arc and Uviol lamps, was the inauguration of the quartz mercury vapor lamp by W. C. Heraeus.

Quartz is almost completely transparent to ultra violet rays, and as it can be heated to a very high temperature without danger of injury, it is now possible to construct lamps of great power, and at the same time economical, from the standpoint of current consumed.

As an illustration of the strength of the quartz lamp as compared with other lamps, the time required for exposure to secure a desired result is one-half that of the iron arc and one-fifth that of the Finsen lamp.

Professor Kromayer was one of the first (about 1904) to use the quartz light as a therapeutic agent. In subsequent years there has been perfected a high-pressure lamp which now bears his name, and so elastic is it, in its application, that it covers a large portion of the field of dermatology.

THE SURGICAL TREATMENT OF PROCIDENTIA.

BY

N. F. LANE, M.D., F.A.C.S.

(Read before the Interstate Homœopathic Medical Society at Scranton, 1918.)

THERE are many methods recommended for the treatment of this condition and for this reason I wish to make a plea for one that has, without exception so far as I know, been satisfactory to both patient and surgeon. Naturally we do not hear of all our failures to cure, for the patient sometimes becomes dissatisfied and consults another surgeon, but if we never hear a complaint we may feel assured that our results are above the ordinary.

The fact that there are so many operations devised for the treatment of procidentia is in itself an admission of failure.

We all know the history of attempts to cure this condition. Beginning with a simple repair of the cervix, cystocele and perineum with its universal failure; with the vaginal hysterectomy with an ordinary repair of the outlet, with the same universal failure; and many other operations with more failures.

Unless the vaginal hysterectomy is performed something after the method of Goff where the broad ligaments are shortened and the cystocele properly obliterated, with the bladder placed high on the stumps of the broad ligaments, the results of vaginal hysterectomy will be very disappointing.

Dr. Charles Mayo has written upon this subject and the paper published in *Surgery, Gynecology and Obstetrics* of 1915. He more properly entitles his paper "Uterine Prolapse, with Associated Relaxation of the Pelvic Ligaments," and in the latter part of his title he hits the crux of the whole situation. It is the relaxation of tissue that causes the trouble

and which makes it so difficult to cure by ordinary repair methods. His operation is, in principle a modification of the Goff operation, the results being the same in both, if I read his article correctly.

I can see that this operation should produce good results and that if there are no masses of inflammatory tissue or adhesions in the pelvis, it should not be a very difficult operation to one accustomed to this sort of surgery. It also obviates the necessity of an abdominal incision which, to the patient, sometimes means much. Dr. Mayo's article is well worth reading if one is interested in methods for curing this unfortunate condition. The illustrations are excellent and make his procedure very plain.

Another method which has had a considerable following is the operation commonly termed the "interposition operation," where the uterus is placed between the vagina and bladder, the bladder being placed high on the posterior wall of the uterus. This operation depends for its success upon the twist given to the broad ligaments and to the plugging of the vaginal canal by the body of the uterus.

Of course, in all these operations the vagina is repaired, but it must be remembered that the repair of the vagina plays little, if any part in the permanence of the cure, for the muscles of the vagina which we depend upon in an ordinary repair are atrophied and practically useless for real support. Therefore, the interposition operation is not indicated except in the first stages of prolapse and if it is performed when not indicated the condition of the patient in one year after operation will likely be worse than before, for there is a distorted anatomy to deal with in addition to the prolapse. Personally, I do not think it is very often indicated and almost never use it. I teach the operation to my students more as a matter of general education, than as a method that has much to recommend it.

The operation which I usually perform and which I recommend to those who have not tried it is as follows:

The cystocele is repaired just as I repair an ordinary cystocele.

An incision is made from just behind the external urinary meatus, through the mucous membrane, to the cervix, the bladder is separated from the vaginal wall and from the uterus to the peritoneal reflection; the most dependent point of the bladder (or a point sufficient to straighten the bladder wall)

is attached by three sutures to the cervix at its junction with the peritoneum. The fascia which normally lies between the vagina and bladder is next drawn together laterally beneath the bladder, the cervix amputated, if necessary, the redundant vaginal wall is trimmed away and the operation on the cystocele completed by stitching the vaginal wall together, thus closing the first incision made.

This makes a strong support and in my experience will always hold if properly performed.

The perineum is next repaired as in an ordinary laceration, except that the operation is more extensive.

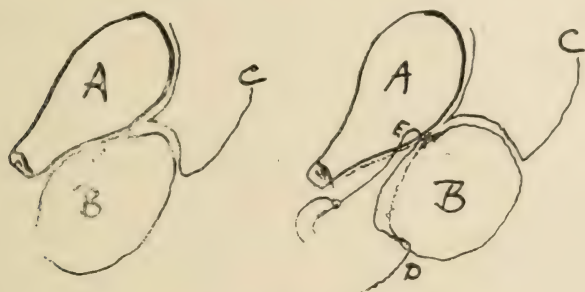
The work so far done gives practically, a normal appearance to the vaginal outlet and is, in reality, as strong and permanent a piece of work as can be done with the materials at hand; but I realize that with practically no support from the ligaments, it will not hold indefinitely and it is therefore necessary to support the uterus from above.

The abdomen is opened, the patient sterilized by an operation upon the tubes, if she is still menstruating, inflammatory adhesions are dealt with and the fundus *fixed* to the abdominal wall. Please note that I do not say, to the abdominal incision, but to the abdominal wall. This is accomplished by drawing the fundus into the lower angle of the wound and closing the peritoneum from the upper end of the wound to the uterus where the peritoneum is stitched to and around the fundus at or below the level of the tubes. This leaves the uterus protruding into the wound outside of the peritoneum. The muscle is then pushed back from its sheath in this neighborhood and the fundus attached to the sheath by a broad base with two sutures introduced well back from the edge of the incision. The sheath is then closed from above downward, and when the uterus is reached the stitch is carried into the fundus, thus again uniting it to the sheath of the recti. The skin is closed as usual.

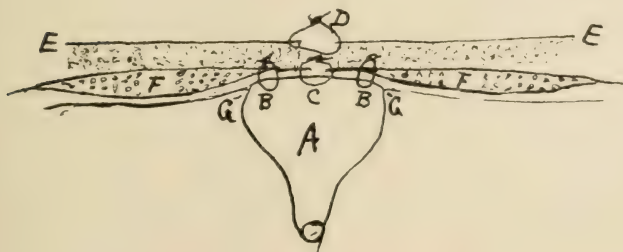
This makes a very firm attachment from which it is almost impossible for the uterus to escape. If the patient is still in the child bearing age and desires to become pregnant, some form of suspension is resorted to instead of the fixation.

In all this work we must bear in mind the fact that the position of the pelvic organs is dependent upon two factors, viz., support of the uterus above by the broad and round ligaments, and support below by the levator ani muscle, or as

usually termed, the perineum. The ligaments hold the uterus in or about its normal position unless too much pressure is brought to bear from above and when this occurs the perineum acts as a buffer to stop further descent and prevent the ligaments from overstretching. Thus it is readily seen that both these agents must be active to prevent prolapse of the uterus, in other words, we must have good ligaments and a good perineum if the pelvic organs are to be maintained in their proper positions, and when these natural supports are missing or have lost their function we must supply this loss by some artificial support such as the fixation described above or by some other method that will accomplish the same end.



- A. Uterus. B. Bladder. C. Peritoneum.
 F. Point of separation of bladder from uterus.
 D. Suture introduced into tip of cystocele and again into the uterus at E which when tied will obliterate the cystocele.



- A. Uterus.
 B. Suture uniting fundus to sheath of recti muscles.
 C. Suture uniting uterus to incision through sheath of recti.
 D. Skin suture.
 E. Skin and fat.
 F. Recti muscles.
 G. Point uniting peritoneum to uterus.

A STRICTLY PERSONAL REVIEW OF DISORDERS OF THE DUCTLESS GLANDS AND THEIR THERAPY.

BY

DR. CLARENCE BARTLETT, M.D., PHILADELPHIA.

(Read before the Homœopathic Medical Society of Allegheny County, April 17, 1918.)

THE clinical and laboratory study of disorders of the ductless glands is by no means a subject of modern interest. During the late 80's and early 90's the wonderful influence of thyroid feeding in cases of myxoedema, cretinoid idiocy, and cachexia strumipriva was discovered and systematized. Following this attention was directed to other organs of internal secretion, but in no case thus far studied have the results approached the brilliancy of those arising from thyroid feeding. The glands to which attention has been directed include the parathyroids, the pineal, the pituitary, the ovaries, the testicles, the pancreas, the adrenal bodies, the thymus, and the mammæ. An immense mass of literature recounting many contradictory statements has accumulated. The medical profession having faith in the ultimate value of the investigations still confesses itself as highly confused, because of lack of definite and concise information.

If one reads only the disquisitions of the enthusiasts on endocrinology, he is forced to the conclusion that it constitutes about the only therapeutic principle. If he believes all he reads, he will decide that in the administration of the internal secretions we have remedies that will solve all our eugenic and sociologic problems. Prisons and insane asylums will become a thing of the past. We might even believe that a properly prepared extract of the peaceful dove or the gentle lamb given singly or in suitable combination is capable of civilizing "The" Kaiser, Von Hindenberg and Company. Alas, it is too good to be true!

If one cannot believe all he reads, of what use then is literature? Many have been the convincing essays that I have perused during my many years' patronage of the periodical medical literature. Like many others I have been hypnotized with the logic of the writer only to be disillusioned when the doctrines inculcated were put to a practical test, namely, clinical

experience. How I have wished that there was a Bradstreet to report on medical writers; to give us a rating that would include the author's reliability as to accuracy and ability; to tell us of his professional opportunities; to enlighten us as to whether he was a practicing physician, a laboratory worker, or a pharmaceutical employee. To the above might be added certain facts that might enable us to judge as to whether the writer had had sufficient experience in life to make him a competent observer. But, gentlemen, there is no Bradstreet to report on medical literature.

The enthusiasm of the haemadenologist has led to the formulation of numerous symptom complexes believed to indicate disease in certain of the ductless glands. The majority of the symptoms thus presented belong to those we have been accustomed to relegate to the neurasthenic class. With the new ideas before us we are too apt to throw away the old and tried, and rush into the administration of the organic extracts without due consideration. Valuable as may be the endocrine products, we most assuredly cannot ignore the province of home and business environment, social surroundings, personal ambitions, and the influence of delicate emotions. Their ability to produce disorders of health is as potent as ever. One disagreeable person in the house can upset a whole family, is an old adage.

Admitting the presence of a disease of the endocrine glands, our clinical problems have not been solved by any manner of means. We know that many of them are liable to the same pathological disturbances as those involving other organs, *c. g.*, syphilis, tuberculosis, carcinoma, etc., and like other organs, they are liable to be influenced by such general states as arterio-sclerosis, interstitial nephritis, gout, and the numerous acute infections. The therapeutic problem is then solved by attention to the primary disorder in whole or in part.

The endocrine glands exhibit a remarkable disposition to be diseased in association with others of the group without any apparent rhyme or reason. Thus the ovaries are oftentimes functionally disturbed in exophthalmic goitre. Indeed, there was a time when gynecologists were inclined to suggest that this disease was in some way related to the female genital apparatus. The pituitary body, when diseased, may be attended by enlargement of the thyroid glands and disturbance of testi-

cular functions. It has even been suggested as within the bounds of possibility that a given case may present more or less disturbance of the entire endocrine system. It is easy for the diagnostician to assert dogmatically that such is the case when all his colleagues have admitted their inability to diagnose. It is another matter for the latter to protect themselves by proving the dogmatic diagnostician to be in error. Many a man gains a reputation for accuracy because he is dogmatic in matters concerning which it is impossible to prove him to be wrong.

Notwithstanding the above statements, I am fully convinced that the various ductless glands exert an important influence on health and disease; but I believe that the knowledge at our command at the present time is not yet well systematized.

The function of the endocrine glands may be increased, decreased or altered. Of literature concerning hyper- and hypo- function we have an abundance; of that relating to altered secretion which may be active for harm, we have but little. I feel that we must admit the possibility if not the probability of such cases, and if so, the disturbed composition of the secretion is capable in its turn of forming a greater or less number of poisons with the resulting many sided symptomatic pictures.

As previously stated, the endocrine glands are not infrequently affected in groups, and hyper-function in one may be associated with hypo-functions in others. Such groupings of functional changes are not to my mind capable of positive recognition clinically unless a happy combination of glandular extracts works out a cure; and even then we can not until there has been a large accumulation of clinical material proven that the *post hoc* is a *propter hoc*.

Disorders of the endocrine functions are not always to be treated by the administration of the indicated glandular extract. Only instances of hypo-function come within this therapeutic field. Cases of hyper-function as of the thyroid demand destruction of the secreting structure by suitable measures, *e. g.*, thyroidectomy, ligation of arteries, X-ray, etc. Such cases should most assuredly not be treated by glandular therapy, and yet time after time have I known this offense to be committed.

With the above introductory remarks, a consideration of the diseases of the endocrine glands seriatim is in order.

THE THYROID GLAND: HYPERTHYROIDISM—The fully developed hyperthyroidism with its characteristic cardinal symptom complex of goitre, tachycardia, exophthalmos and tremor has long been known as exophthalmic goitre and requires no comment. Less known but more important because more frequent are the cases of hyperthyroidism associated with simple productive goitre. The usual clinical course of such cases is symptomless for a period of 10 or 12 years, when cardiac disturbances become prominent after which various clinical features of hyperthyroidea appear.

As to the less frequent symptoms of hyperthyroidism, let me say that they exist in great variety, and may involve any of the systems of the body. All of them are seldom ever present in any one case. The clinical groupings of symptoms are so varied that I have often wondered if they should be relegated to the class of hyper-function. Like causes produce like effects, not a few times, but every time. It would seem to be that such cases are due in part at least not to excess of secretion but rather to disordered secretion acting as a poison, the symptomatic variations being dependent upon the special poison generated in each instance. In any case, the radical treatment is the same, namely, thyroid destruction. Might it not be wise to coin the word "parathyroidea" to give individuality to this class of cases?

Last summer there was referred to me from the west an active business man supposed to be suffering from neurasthenia. He exhibited a peculiar fine tremor, and his pulse was rapid. He had been ill several months and had been accorded a furlough from business. An examination showed that he had had a small goitre for many years, but as it had never given him any trouble, he had learned to ignore its existence and had not mentioned it to his physicians. This patient was greatly improved by X-ray treatment; in fact, he now considers himself well.

As examples of atypical hyperthyroidism may be mentioned certain cases of digestive disturbance, diarrhoea, cutaneous eruptions, emaciation, purpura, nephritis, haematuria, migraine, hysteria, etc. In each case when the illness is dependent upon the thyroid, a small goitre is almost certain to be present, and as invariably there is an associated quickening of

heart action, and a peculiar fine tremor. It must ever be borne in mind that the size of the goitre bears no relationship whatever to the severity or the multiplicity of symptoms.

HYPOTHYROIDISM—Of typical hypothyroidism, myxoedema and cretinoid oedema I need say nothing. Their characteristics are known to all of you. The myxoedematous state is dependent upon a practical athyroidism. If the loss of function is incomplete, then symptoms must be expected to present atypically; and it is these cases that interest the profession generally, and it is in them that the beneficial influences of thyroid feeding have been observed most frequently. How best to describe these cases I hardly know. The majority of the patients are middle aged women of unshapely embonpoint, mentally sluggish, with dryness and possibly scaliness of the skin, slow pulse, and lowering of the bodily temperature. The thyroid gland is not palpable. Such cases are to be treated, of course, by the administration of thyroid extract, but the dose demands discrimination not once but always. As most of the patients are inclined to assume the prerogative of self-regulation of the dose, the results are not such as we would like. If neglected, such cases go on to an early arterio-sclerosis, and this factor adds to our therapeutic difficulties, i.e., indeed, it does not make a symptomatic recovery impossible. If a case is properly diagnosed in the beginning, and then mismanaged as to administration of the remedy, it is with the greatest difficulty that the patient can be induced to make another effort at glandular administration.

From the fully developed case of myxoedema to the mild case of hypo-thyroidism is a long symptomatic bound. Cases at the extreme must present symptomatic variations so great that it is impossible to credit the assertion that they are of the same groupings; and yet such is often the case. Such mild cases must exist, for every severe case must have a beginning and a progress from bad to worse. Even in them, lowered temperature, relatively slow pulse, increase in weight, mental and physical lethargy, are the diagnostic signs. In these cases it is probably easier to recognize the diminished thyroid because the tissues of the neck do not present the marked thickening of the fully developed myxoedema. If one is in doubt as to whether he is dealing with a case of hypothyroidism or simple obesity, let him utilize the patient's hands as a guide. In obesity, the soft parts of the hand do not exhibit the general thickening observed in hypothyroidism.

If it is decided to administer thyroid extract, let it be done with care and discrimination. Begin with small doses, *i. e.*, about one or two grains three times daily. Never should the initial dose be a full one. Then the result is to be gaged by a return of normal frequency of the pulse, softening of the skin, resumption of perspiration, diminution in weight, and improved mental and physical activity.

As matters now stand, cases of hypothyroidism only have a rational basis for thyroid therapy.

Nevertheless, thyroid extract has been recommended for a large number of diverse conditions, and with alleged varying degrees of success. Reading the different reports over, I must confess myself as not convinced though still open to conviction. Many of the diseased states mentioned are generally regarded as well nigh incurable, and empiricism in the absence of more efficient measures is justifiable. Nevertheless, we must not be carried away with chance shot prescriptions.

These conditions for which it has been suggested as a remedy are acromegaly, acroparaesthesia, amenorrhœa, arthritis deformans, chilblains, chronic rheumatism, delayed union of fractures, dysmenorrhœa, eczema, acne rosacea, epilepsy, hemophilia, acathysis, psoriasis, enuresis, migraine, dementia, praecox, obesity, pruritus, psychasthenia, Raynaud's disease, rickets, tetany, and to be certain of not omitting anything, I will add "and so forth." The probability is that thyroid extract is of use only in cases of glandular inefficiency presenting certain symptomatic complexes suggestive of the above conditions.

Nevertheless there are things on heaven and earth that are not dreamed of in our present day philosophy. The able clinical teacher of my student days, Dr. Augustus Korndorfer, has offered the reasonable suggestion that Hahnemann's dyscrasia had an endocrine basis. Much as one may ridicule the multiplicity of the complaints for which thyroid extract has been recommended, he is forced to admit that each and every one of them may be regarded as of constitutional, call it developmental or metabolic, if you please, and as such fails of adequate explanation on a pathological basis.

THE PARATHYROID GLANDS—Insufficiency of these structures produces tetany. We know nothing of hyperparathyroidism. The administration of the extract is, therefore, positively indicated in cases of post-operative tetany. Consider-

able claims have been made for its efficiency in paralysis agitans. I know of no disease in which palliation or cure is more remote than this one. The literature is not such as to give one much confidence in the results. Nevertheless, if I had paralysis agitans myself, I would give parathyroid extract a fair trial.

THE THYMUS GLAND—Concerning this organ, the greatest differences of opinion prevail. We are probably correct in saying that the functions of the thymus are but imperfectly if at all understood.

Clinically we know that it is sometimes enlarged in exophthalmic goitre and removal of the gland is sometimes practiced for the cure of that disease. Experiments on young tadpoles fed with thymus extract show stimulation of growth. Administered in the frog stage, the changes of metamorphosis are considerably delayed. This would suggest that we try thymus extract in mental and physical backwardness of children. It is very doubtful, however, if we can hope for any results, for the use of the remedy was suggested a score or so of years ago, and still has not received anything like general recognition.

The thymic death is another proposition apart from glandular activity. Many clinicians look upon this as the only result of disease of the thymus. This condition has been known for seventy-five years, and during all that time, it can hardly be said that our knowledge of it has scored any practical advance. Its diagnosis is not always certain. The advocacy of the X-ray has been questioned by the Mayos who assert that in not one instance have they observed any help afforded them by this diagnostic measure.

Nevertheless the trend of experience of the large majority of X-ray clinicians seems to prove that enlargement of this gland is recognizable by the roentgenogram. True it is that physical examination is usually sufficient, but the X-ray clinches the diagnosis, as I have been able to determine.

Cases of hypertrophied thymus are notable for their association with lymphatic enlargements. This makes the treatment of the condition a complicated problem. Medicinally, our constitutional remedies are in order, *e. g.*, the calcareas, iodine, bromide, etc. When symptoms are dependent upon the mechanical effects of the enlarged thymus, X-ray treatment seems to be the best preliminary measure.

Thymus extract has not been used to any great extent for internal medication. It has been recommended as of possible value in cases of exophthalmic goitre in cases which have resisted ordinary medical measures and surgical treatment. The effects attributed to it in these cases include reduction of exophthalmos, lowering of pulse rate, and improved general condition of the patient.

The one condition in which thymus extract should be tried on a purely empirical or experimental basis, is in delayed development. The ultimate results of such a condition are so disastrous and our knowledge of its pathology so limited, we are justified in availing ourselves of every possible measure, providing it is one that does not harm our patient. One case has been reported in which the patient, a boy of 16 years exhibited slow growth with poor development of his genitals, was remarkably improved in one year's time by the administration of thymus extract in doses of fifteen grains daily.

Empirically also, thymus extract has received some commendation in the muscular dystrophies, arterio-sclerosis, arthritis deformans, and chlorosis.

With the limited time at my disposal, I will say nothing of the pituitary, disease of which is largely a surgical question, or of the adrenal bodies, of which we know scarcely more than we did when Addison published his classic description of the disease which has long borne his name.

OVARIES—It is next in order for me to speak of the ovaries as glandular secretory organs. Here I believe we have a most valuable therapeutic field. Our troubles in the past have probably been due to our taking too restricted a view of the preparations used. There can be no question concerning the value of ovarian extract in cases of illness due to artificial or natural climacteric. I am thoroughly satisfied that I have seen brilliant results. If, however, we limit our therapy to some particular extract, such, for example, as that of the corpus luteum on the one hand or of the whole ovary on the other, we must limit our therapeutic efficiency. Unfortunately, we have no reliable indications for any of the particular preparations. We must avoid giving unconditional support to the advocates of any one of them. In each instance, we must make a "try" with one; with success, we continue; with failure we try another. I have seen excellent results not only in

cases of climacteric disturbances, but also in infantile women whose ovarian functions appear to be deficient.

Literature abounds with reports of cases of menstrual disturbances as amenorrhoea, dysmenorrhoea, and menorrhagia, in which one or the other of the ovarian preparations has proven successful, I might almost add to a dramatic degree. Certainly the evidence at hand justifies a resort to them before radical surgical procedures are taken.

Ovarian feeding probably stands second only to thyroid administration as a well established principle of internal glandular therapeutics.

In conclusion permit me to thank you most cordially for the royal reception accorded me by the physicians of Pittsburgh and vicinity. Especially do I feel grateful to Dr. Carmalt and your house physician, Dr. Castro, to whom credit should be given for selection of cases for this afternoon's clinic and for valuable aid extended in working up the details of the histories of the cases.

THE NEUROSIS PROBLEM BY THE LIGHT OF WAR NEUROLOGY.—Imboden reviews the extensive literature on functional neuroses of the last three years, emphasizing that there is no essential psychologic difference between the neuroses among the soldiers and the neuroses of peace times. Human life is a struggle for existence even without the thunder of artillery and starvation blockades, and many get wounded and live on, crippled, or sink by the wayside. He remarks that the fact that so few men develop neuroses among the millions engaged in this awful warfare shows that civilization does not develop weaklings to the extent that had been feared. He regards it as significant that the professor of psychiatry at the University of Jena has recently published a manual on psychoanalysis, saying that psychotherapeutic demands are now made on every physician during these years of war, and the psychoanalysis movement should have general attention. Imboden declares that the one fact emerging from the war neurology data to date is the increasing appreciation of the psychic factor in the genesis of the clinical pictures of the nervous state. Nonne even advocates hypnosis in treatment, and the array of disguised persuasion methods proposed is legion: Goldstein advocates a sham injection under a few whiffs of ethyl chlorid; Weichardt the continuous bath until all the symptoms subside; Podmanizky lumbar puncture to cure abasia. The "extremely logical and extremely brutal" method introduced by Kaufmann, consisting in strong electric shocks with loud, staccato military commands to do certain exercises, has realized some surprising cures, but time has shown that relapses are liable to follow on the slightest provocation.—*Journal American Medical Association*.

EDITORIAL

THE VOLUNTEER MEDICAL CORPS.

THE Council of National Defense is now making an effort to have all physicians who are not eligible to the Medical Reserve Corps on account of over-age (fifty-five years), physical disability, essential public or institutional needs, to become affiliated with a Volunteer Medical Service Corps. The purpose of this organization is to secure the names of and to classify for some available service all physicians who are not eligible for military service. It is expected that the services of the members of the Volunteer Medical Service Corps can be utilized for consulting work, for administrative and general medical or surgical work in hospitals, as examiners on local or medical advisory boards, for the reclamation of registrants rejected for physical unfitness, to render service to families and dependents of enlisted men and for general sanitary supervision and administration.

Physicians who become members of this Corps will not be *ordered* to render service. They will be required to accept such service as their qualifications fit them for from time to time as the occasion demands. The Corps is not authorized to issue any commissions nor does the Government guarantee any salary. The question of compensation and place of service must be determined at the time the member enters upon any active duty.

All physicians who are not eligible for the Medical Reserve Corps and who desire to become affiliated with the Volunteer Medical Reserve Corps are requested to write to the medical section, Council of National Defense, Washington, D. C., and application blanks and circulars of information will be sent. If the physician is accepted by the Central Govern-

ment Board, he will be notified to that effect and a small badge will be issued to him by the authority of the Council of National Defense.

G. H. W.

THE HOMŒOPATHIC ENDOWMENT FUND.

ON various occasions during the past year, Dr. John M. Lee, President of the American Institute of Homœopathy, has brought forward a plan for raising a large fund to be used for the purpose of advancing the interests of homœopathy in the United States. At the meeting of the American Institute of Homœopathy in Detroit, this matter was again presented by Dr. Lee and the movement has now been formally authorized by the American Institute of Homœopathy.

It is planned to raise a fund of fifteen million dollars to be administered by an Advisory Board elected by the Board of Trustees of the American Institute of Homœopathy. It is planned that each of the eight homœopathic medical colleges shall have a representative on this board.

The purposes to which the fund shall be applied are as follows:

(a) To build, equip and maintain a research laboratory for scientific investigation along lines related to homœopathy.

(b) To assist homœopathic colleges now in existence or to be established.

(c) To assist such universities as include in their medical schools, departments giving instruction in homœopathic materia medica, theory and practice.

(d) To assist homœopathic hospitals.

(e) To encourage post-graduate or other courses in homœopathic materia medica, and applied homœopathy.

(f) To assist in, establish, or conduct propagandistic and publicity campaigns for the purpose of securing students.

(g) To provide for the training of necessary additional nurses; and,

(h) To meet other medical exigencies arising out of the present war.

The amount of the fund at first thought seems to be a large one indeed for the homœopathic profession to attempt

to raise; but in these days, when we have become accustomed to think in billions, and when such large amounts have been given to other departments of medical activity, it is not disproportionate to the number and influence of homœopathic physicians and of homœopathic patrons in the United States.

One provision of the fund provides that eighty-five per cent. of the amount raised shall be turned over to the respective districts in which the funds have been raised and they shall be used for the benefit of the institutions in that particular district.

A committee consisting of several prominent homœopathic practitioners has been appointed and it is presumed the co-operation of every physician in the country will be solicited in furthering this work. The raising of such a fund would insure the perpetuity of our homœopathic colleges and a very large proportion of our homœopathic hospitals, and it is an object that is worthy of active support of every homœopathic physician who has an interest in the perpetuation of homœopathic principles and institutions.

G. H. W.

ELEPHANTIASIS TREATED BY KONDOLEON OPERATION.—Sistrunk (Rochester, Minn.), says: Several years ago Kondoleon, of Greece, described an operation which will probably occupy an important position in the future surgical treatment of lymphatic obstruction. His report of the results obtained by the method, and the case reports which have been published by several surgeons in this country, have been sufficiently encouraging to make it appear that relief may now be offered to many patients of a class which formerly has failed to respond to the other methods of treatment. The operation is based upon the realization that the superficial and deep lymphatics are distinctly separated by the aponeurosis covering the muscles. His studies have shown that the odema in such patients was usually limited to the subcutaneous tissues and fat lying between the skin and aponeurosis. By removing portions of the aponeurosis he hoped to correct the superficial lymphatics with those of the deep group and in this way obtain drainage of the superficial structures. The operation consists in long incisions along the inner and outer aspects of the affected limb and the removal of a large slice of oedematous fat. The aponeurosis is then opened and a portion of it three or four fingers in width, is excised. The wounds are closed without drainage in such a way that the skin with the fat attached to it comes in contact with the exposed muscle. The author then reports several successful cases.—*Surg. Gym. and Obs.*, Vol. xxvi, p. 388.

GLEANINGS

A HITHERTO UNRECOGNIZED CAUSE OF HIGH BLOOD-PRESSURE.—Edgar F. Cyriax, of London, says that among the various conditions which have been accepted as causes of high blood-pressure, we search in vain for mention of one which is very common, namely irritative states of the erector spinæ.

Of these irritative states, there are three chief groups:

- (a) Hypertonus.
- (b) Diffuse fibrosis or fibrositis.
- (c) Diffuse congestion.

All of which may exist, with various degrees of intensity, either locally or generally, alone or in combination.

The diagnosis of these conditions is not difficult when they are looked for:

(a) Cervical hypertonus, if at all pronounced, is quite obvious, since it produces the short thick neck which for centuries has been associated with apoplectic tendencies. Pathological increase in the normal curve forwards in the lower cervical region is often met with, and is doubtless the result of the persistent muscular contraction. Hypertonus in the dorsal and lumbar regions is not so obvious. With the patient lying on his face, there should, normally, be no difficulty in relaxing the extensor muscles of the back, but in hypertonus this is often impossible or very difficult. If the patient is able to effect this relaxation, the slightest stimulus, such as a mere touch, will immediately induce a continued powerful contraction of the muscles mentioned. Changes in the normal curves of the back may be found; a common example is lumbar lordosis.

(b) Diffuse fibrosis or fibrositis is a frequent cause of so-called "rigid back," a condition whose importance has, in my opinion, been greatly under-estimated, for it is a potent cause, either primary or secondary, of disease. Its chief characteristics are limitation of movement, pain on attempting to move, and diffuse tenderness in the erector spinæ. Under this heading also fall the well-known nodular thickenings of the neck, which are the cause of "muscular headache." These thickenings are readily defined by ordinary deep palpation.

(c) Venous congestion although usually only an accompaniment of (a) and (b), this may exist alone, and is often associated with a slight degree of edema. The commonest site for local edema is around the seventh cervical and first dorsal vertebræ, where a circumscribed swollen area may be found, boggy to the touch and not unfrequently showing radiating lines of small congested blood vessels.

The method by which these irritative states induce elevation of the blood-pressure is not difficult to trace. It is by means of a continued series of sensory stimuli to the posterior spinal nerves, in other words, by a nerve-ending series of pressor effects. If Nature is unable to com-

pensate for these as they arise, an increase in the blood-pressure is the result.

As regards the actual exciting cause of the irritative states of the erector spinæ, there is one important group, which up to the present seems to have escaped recognition, *i. e.*, anomalies of the vertebræ either as regards articulation or position. Synovitis of the vertical joints, especially the cervical, is much commoner than generally supposed, and so, too, are slight malpositions of the bones, which in their turn necessarily involve similar anomalies as regards their cartilages. In all these cases, slight multiple adhesions are frequent. The reason why these vertebral adhesions and synovitis are so common in the neck is, to a large extent, due to the fact that one is so seldom called upon to exercise the cervical muscles against resistance. The pathology of joint trouble from insufficient use holds good for the spinal column just as for articulations elsewhere.

From the practical point of view, the identification of the above-mentioned causes of high-blood pressure is of considerable importance. All treatment must be directed towards removal of the cause of disease, and in these cases, the best means—indeed, the only satisfactory one—is that which is described in the term “mobilization of the spinal column.” By this is meant active and passive movements of the vertebral joints, passive manipulations (vibrations, petrissage, etc.) of the erector spinæ, a suitable selection being made in each case.

Cyreax holds that if the cause of the elevation is partly or wholly to be found in irritative states of the erector spinæ, no mechano-therapeutic program is complete without appropriate trunk and neck movements.—*Practitioner*, November, 1917.

THE ORGANOTHERAPY OF MENSTRUAL DISORDERS—Novak writes that the treatment of uterine bleeding of hypothyroid origin is simple enough, consisting essentially in the administration of thyroid extract. It must not be forgotten that this substance is a powerful agent whose use must always be rigidly supervised by the physician. Excessive dosage gives rise to the characteristic symptoms of hyperthyroidism, such as tachycardia and tremor. When abuse of the drug is protracted, serious injury may be inflicted upon the cardiovascular system.

The average dosage of thyroid extract in these cases of mild hypothyroidism should never exceed five grains a day, and in most cases it will be much less. The patient should be observed at least once a week to determine her tolerance and to make sure that no harm is resulting from the use of the thyroid. The principal criterion should be the condition of the heart. If the heart rate is not accelerated, one may feel assured that no hyperthyroidism exists. If, on the other hand, it is found that the use of the thyroid is accompanied by a gradual mounting pulse-rate, together with nervousness, tremor, etc., the dose should be cut down. For prolonged administration one or two grains a day is often sufficient.

An important guide to the action of thyroid extract is its effect upon the body weight, which is practically always diminished. This, as is well known, is the result of a stimulating effect upon the oxidation processes in the body. It is seldom advisable for the patient to lose weight at a

faster rate than two or three pounds a week. The total loss of weight depends, of course, upon the initial body weight and upon the duration and intensity of the treatment as well as upon such adjuvant measures as dietetic regulation, exercise, etc. In suitable cases the treatment yields striking results within a month, menstruation becoming normal and the health being improved in every way. Instead of discontinuing the thyroid medication abruptly, it is wise to diminish the dosage gradually, and to keep up small doses for a considerable period of time.

Pituitary extract has always been employed in the treatment of uterine hemorrhage. When the latter is due to atony of the uterine muscle, as in postpartum or postabortive cases, the results are, as is well known, highly gratifying. This cannot be said of uterine hemorrhages of other types. The feeding of pituitary extracts by mouth is attended with as little success in the usual case of non-obstetrical uterine hemorrhage as in most other conditions in which it has been used. Somewhat more satisfactory appear to have been the results when pituitary extract has been given subcutaneously or intravenously. The latter method, in the hands of Kalledey, is stated to have yielded good results. Such reports, however, are still too few to make any great impression on therapeutic practice. In spite of Kalledey's contention to the contrary, it seems likely that any hemostatic effect exhibited by pituitary extract in these cases is due to the resulting tonic contraction of the uterine muscle rather than to any corrective endocrinal effect.—*Therap. Gazette*.

CARDIOVASCULAR EXAMINATION.—S. Calvin Smith (*Journal A. M. A.*, March 30, 1918) draws from analysis of the results of the examination of some 35,000 men in one of our military camps. Visible pulsations and accelerated pulse rates not due to emotional causes, and displacement of the maximal cardiac impulse downward and to the left and changes in rhythm and volume of the pulse were regarded as of greater significance than the detection of cardiac murmurs. Many murmurs were noted which disappeared on lying down after brief exercise, and these were evidently functional, due to a decreased tone of a strong heart with rest. Murmurs which persisted at given areas, which were accompanied with accentuations, thrills, or cardiac enlargement, or which were typically transmitted were regarded as important. The exercise test of 100 hops on one foot proved most valuable by often bringing out evidences of slight cardiac hypertrophy and myocardial affections which could not have been discovered otherwise. It showed the presence of auricular fibrillation and brought out a pulse deficit in three apparently healthy young men. Blood pressure determinations were of value in the detection of early aortic insufficiency by showing a femoral increase, as compared with the brachial pressure. Such cases had no other signs except a slight basal murmur and precordial pain with exaggerated breathing after exertion. Of the entire number of men only slightly over one per cent. were rejected. Of the rejections over 66.5 per cent. were due to mitral lesions and less than one per cent. to aortic. In some fifty-two per cent. of the cardiac rejections measles was prominent in the previous history, and it seemed that that disease might not be so harmless as commonly considered. Nearly twenty-seven per cent. of the men examined showed some thyroid en-

largement, but this did not seem to have any bearing on the presence or absence of cardiac disorder and seemed to be due to the severe demands of military training in men previously "soft." The average normal pulse rate for these healthy young men was found to be about 82 rather than the classical 72 per minute.—*New York Medical Journal*.

MYOCARDIAL DEGENERATIONS.—The acute myocardial changes following infections are generally attended by a more or less persistent increased frequency of pulse-rate, even while at rest, with a low blood-pressure, approximately 90 systolic and 60 diastolic, says Roussel. A diminished pulse frequency in these cases can be accepted as a normal result.

Rest, followed by gradual exercise, is of main importance, with the exhibition of tonic doses of strychnia. In acute myocardial degeneration, which sometimes accompanies syphilis, the question arises as regards the use of Ehrlich's salts. Personally, I am inclined to believe that the administration of mercury, either hypodermically, by inunction, or per os, is the safer plan to pursue provided we subsequently obtain repeated negative Wassermann reactions. If this does not follow, or if, in the rare instance, mercury cannot be given—as in a case of malignant precocious syphilis, that I reported—comparatively small doses of the older salt should be given in preference to the new, and in these cases never by the intravenous method; and, of course, the subsequent use of mercury. These remarks apply with equal force to the cardiac cases which develop in the later stages of lues, with the addition of the iodides, which are often very useful.

In the chronic forms sufficient exercise should be permitted, short of producing heart strain—alternating, if necessary, with periods of rest in bed. This can only be determined by a careful study of the individual case. All excesses are, of course, to be avoided. The food should be restricted to the necessary caloric value; meat diminished, and cooked in such a manner as to be most digestible. It is to be remembered that acute indigestion may cause death through the crippled heart. Liquids should not be taken in large quantities.

Attention to the condition of the bowels is of importance—the regular use of an after-dinner pill, or an occasional mercurial purge, followed with high rectal irrigation. In persons over weight the restriction of the use of fats, starches and sugars is often sufficient to cause a reduction and improvement of symptoms. Massage and medical gymnastics are especially useful in these cases.

The Oertal and Schott treatment are also useful in selected cases, and can be carried out at home with a trained attendant.

Digitalis, diaglen, digapuretin, strophanthus and spartein sulphate are useful in the dilated group, but are to be used with caution with high tension. I frequently add tincture of aconite to one of the above with satisfactory results.

The intravenous method should be reserved for particular indications and extreme cases.

Most useful is the soda salt, which can be associated with either

aconite or digitalis. They can be given in larger doses than usually recommended.

In the bradycardia group aromatic spirits of ammonia, 15 minims every two or three hours, caffeine and small doses of strychnia. Diuretin is useful in the edematous cases and may be associated with infusion of digitalis. Also the combination of calomel, digitalis and squills. Oxygen is useful in attacks of dyspnea attended with cyanosis.

Morphine is one of the most useful of the hypnotics and is as free from danger as veronal. Atropine may be combined with it or given alone in the cases of heart block or those of pulmonary edema with a relative lowering of the blood-pressure. Adrenalin is occasionally of use in suitable cases. The rise in blood-pressure is prompt but soon followed by a corresponding decline; in certain conditions its use would be dangerous. Venesection may save life in an acute dilatation of the right ventricle.—*Med. and Surg.*, Nov., 1917.

PSYCHOANALYTIC TENDENCIES.—William W. White (*American Journal of Insanity*, April, 1918) tells us that Freud has now abandoned the theory of sexual trauma in infancy in favor of the incest complex as the root complex in all neuroses. It is a measure of the progress of the individual along the developmental path and with the discovery of this we go far toward solving the problem of the neurotic or the psychotic. To deal with such problems there has arisen an energetic concept of psychic force—the libido—and keeping it in mind we are prepared to attack problems of maladjustment, failure to integrate, etc. Adler has gone away from the purely psychological viewpoint and shown us that the neurotic's symptoms are expressions of his attempt to compensate for organ inferiority. In all departments of knowledge we may see analogous process; in physiology, the conditioned reflexes of Pawlow; in philosophy, the dynamic concept of Bergson; in philology, theology, mythology, etc. Thus psychoanalysis forms a common denominator for the progress of knowledge of mankind, never as bad as the realist paints, rarely as good as the idealist fancies, but "human, all too human," with hopes and fears, struggles, successes and failure. This can be illustrated by the modern attitude toward the alcohol problem, it is not a therapeutic or an economic problem primarily, but a psychological one. Why does the individual use alcohol? That learned, we can attack the problem with some degree of hope. Furthermore, by the aid of psychoanalysis, we are beginning to understand our mental patients and actually do something for them.

WAR SURGERY OF THE CHEST.—A. L. Lockwood and J. A. Nixon (*British Medical Journal*, Jan. 26, 1918) emphasize the fact that one of the greatest difficulties in treatment is the recognition of those cases which will recover without operation and those which will not. Immediate operation seems to be demanded in all chest wounds in which the diaphragm or abdomen is involved; where there are extensive injuries to the bony skeleton of the thorax; where there is a "sucking" wound; and whenever evidences of septic infection are present or develop. Other than such cases should be treated expectantly and immediate operation is not justified. A most important element in the

treatment in all cases is the evacuation and early handling. Cases with traumatopnea should have their wounds carefully cleaned and sutured without anesthesia in the advanced dressing station. Evacuation to the surgical unit for chest cases should be as prompt and rapid as possible. On arrival, the patient should be dressed in clean pajamas; laid between warmed blankets in a heater in the most comfortable position, preferably with the injured side dependent; and continuous rectal administration of water containing 5 per cent. each of glucose and sodium bicarbonate be instituted. If necessary 2 per cent. sodium bicarbonate solution should be given intravenously, or in very serious cases 600 to 800 mls of blood should be transfused. Hot drinks are given, but no stimulants are administered. Sleep is secured by quietude, darkness and omnopon or morphine. Urgent dyspnea should be relieved by aspiration in hemothorax or pneumothorax cases; and if fresh hemorrhage is suspected this should be accompanied by partial oxygen replacement. When the condition permits, after such resuscitative measures, a most searching examination should be made to determine the precise nature of the injury and all foreign bodies should be carefully located with the X-rays. If immediate operation is required the examination should be cut short when the fact has been determined and localization of foreign bodies completed. One must, of course, make sure that the patient's condition will permit of an operation being performed.

In a subsequent issue (February 2, 1918) the authors offered the following recommendations for operations in cases of chest wounds: An ampoule of omnoponscopolamine is given one hour before operation and half an ampoule is administered half an hour later if the patient is not sleeping. He is kept with his injured side dependent, usually in a half sitting position, throughout operation. The skin is cleansed with a 3 per cent. alcoholic solution of picric acid, novocain and one quarter per cent. potassium sulphate in normal saline, to which epinephrine is added just prior to injection. Finally, local infiltration anesthesia is carried out at a short distance from the wound. Gas and oxygen should be kept ready for use at any time. The wound track is first freely excised, the skin again painted with the picric acid, and the chest widely opened by resection of a portion of rib, the fourth if the wound permits. The pleural cavity is rapidly mopped out with gauze wrung out of hot saline and hemorrhage, or lacerations of the diaphragm are first attended to. If there are accessible abdominal injuries these are repaired through the diaphragm. Missiles are removed from the liver, the track cleaned out with a Volkmann spoon, swabbed with saline and ether, and oozing checked by deep sutures. The diaphragm is next closed by suture and the intrathoracic lesions attacked. Missiles should be removed from the lung or lacerations excised and the lung sewed with a blunt, round needle. All fragments of missiles, cloth or bone must be sought and removed from the chest cavity and the cavity well cleaned with swabs wrung dry out of hot saline, and finally out of warmed ether. The chest should then be closed tightly by suture of the first layer of muscles and the skin then carefully sutured. A dressing of gauze is applied and can be coated with mastisol or aeroplane "dope" and a broad adhesive plaster band tied over the dressing. In some cases, especially with two large

openings far apart, or laceration of both leaves of the diaphragm, the operation can be divided into two stages separated by about two hours, during which the patient is not disturbed or moved. Postoperative treatment is most important and includes the maintenance of a half recumbent position; inhalation of oxygen, passed through warm brandy, for cyanosis; the use of omopon for restlessness; and the prevention of acidosis by the rectal administration of sodium bicarbonate and glucose in water, are accompanied by a profound fall of blood pressure. Patients with uncomplicated closed wounds, who arrive at the Casualty Station well-cared for show normal pressure. *When severe hemorrhage (internal) has occurred and the patient has been exposed to cold for some hours, or when infection has become established, hypotension is present and progressive.* Reaction from perforation or laceration of the diaphragm depends on the amount of hemorrhage or incidence of sepsis or entrance of air.

Compound fractures of the lower extremity, especially in the region of the knee and with hemorrhage show a considerable fall in blood pressure. Peculiarly even lower blood pressure is associated with fractures of the arm. In face wounds there is not much alteration of blood pressure unless there is an associated compound fracture of the face bones, when the pressure is generally lowered. *Multiple wounds* of the body and extremities are accompanied by a considerable fall in blood pressure.

With regard to *restorative measures* these observers conclude that: In cases of profound shock with loss of blood excellent results are obtained from direct blood transfusion. Injection of the calcium hypertonic gum solution (calcium chlorid 0.075 gm., sodium chlorid 1.325 gm., gam acacia 2 gm., water 100 cc. sterilized) will produce an immediate rise of pressure in hemorrhage cases or cases of hypotension complicated by toxemia. This rise may tide the patient through an operation. If the source of infection is removed the tension will remain supported. In milder cases of shock and hemorrhage infusion with modified Ringer solution (sodium chlorid 2 gm., potassium chlorid 0.05 gm., calcium chlorid 0.05 gm., water 100 cc.) is useful. Results obtained with physiologic saline by infusion have been unsatisfactory.

It has also been noted that an uncomplicated wound running a favorable course shows a steadily maintained blood pressure. With the onset of gas gangrene or sepsis there is a sudden fall of pressure. Occasionally a long sustained hypotension may persist, although the patient is quite well and no sepsis exists. *A steadily rising or maintained high pressure reading, even in a severe wound, may be taken as a most favorable prognostic sign.*

Cannon thus summarizes his studies in *acidosis*. Cases of low blood pressure due to shock, hemorrhage or infection with gas bacillus have a diminished supply of available alkali in the blood, that is an acidosis. As a general rule, the lower the pressure the more marked the acidosis. The pulse is rapid in these cases, but does not vary with the degree of acidosis. The *respiratory rate* becomes more rapid as the acidosis increases until, shortly before death, a true *air-hunger* may prevail. *Blood sugar* is usually somewhat increased above the normal in shock and hemorrhage.

The acidosis in these cases, therefore, is not due to lack of circulating carbohydrate.

Operations on men suffering from shock and acidosis result in serious and rapid sinking of arterial pressure, when it is already low, and in marked and sudden decrease of the alkali reserve of the blood when that reserve likewise is already low. This change may not occur if nitrous-oxygen anesthesia, instead of ether, is employed, but that anesthetic affords no guarantee against the ominous decline. Shocked men, suffering from extreme acidosis with air-hunger can be quickly relieved of their distress by intravenous injection of a solution of sodium bicarbonate and their blood pressure restored to normal.

Cannon has also drawn attention to *fat embolism* following fractures of the larger bone, as a causative factor in primary shock, with resulting *acapnia*, which is best combatted by *carbon dioxid rebreathing*.

Cannon's conception of shock is one of *exemia*—a term originated by Hippocrates and signifying the draining of blood from essential parts of the circulatory system, especially by capillary concentration.

SOME EXPERIMENTAL RESEARCHES AND CLINICAL OBSERVATIONS ON WOUND SHOCK, BLOOD PRESSURE, ANESTHESIA, ACIDOSIS AND FAT EMBOLISM AT THE FRONT.—The Medical Research Committee of Great Britain has just issued an official bulletin on the "Investigation of the Nature and Treatment of Wound Shock and Allied Conditions." This study and that of Geoffrey Marshall on "Anesthetics at a Casualty Clearing Station," indicate that the scientific spirit is laboring industriously and effectively even under fire. Marshall's researches speak for themselves, although the editor has taken the liberty of *italicising* his more pregnant conclusions. Some points in the report of John Fraser, F. M. Cowell and W. B. Cannon also deserve editorial emphasis.

Their most interesting researches and observations may be summarized as follows:

Scalp wounds show no appreciable alteration in blood pressure. Cases of compound fracture of the skull with dura intact show a relatively high blood pressure, averaging above 140 mm. Penetrating wounds of the skull with free drainage are generally associated with low blood pressure—from 60 to 112 mm. In perforating wounds the blood pressure would appear to vary according to the anatomic distribution of the wound. In those involving the ventricles, the blood pressure is high, varying from 130 to 170 mm; otherwise the pressure is low. The blood pressure subsequent to wounds of the head is apt to be unstable. If operation is performed under general anesthesia before the blood pressure has become stable, disaster is liable to ensue. Untoward results can be diminished by delaying operation until the blood pressure has become stable or by performing the operation under local anesthesia, with supplemental scopolamin-morphin amnesia.

The following deductions have been drawn regarding *abdominal wounds*: In patients with intraperitoneal injury of a hollow viscus, arriving at a casualty the systolic pressure varies from 50 to 100 mm. When the period of primary wound shock has elapsed, six to ten hours, rest, warmth and the sedative action of morphin raises the blood pres-

sure. After ten hours secondary wound shock due to sepsis and loss of blood becomes evident. Perforating wounds of moderate severity affecting solid viscera are associated with relatively high blood pressure; wounds of the liver and kidney exhibiting a systolic reading of from 130 to 140 mm even when hemorrhage has been considerable. Perforating wounds of the viscera which do not open into the peritoneal cavity are associated with practically normal pressure. Removing large amounts of blood from the peritoneal cavity is accompanied with a very rapid fall of blood pressure.

Cannon thus correlates the factors involved: Primary wound shock of a reflex character with a rapid fall of arterial pressure; sweating, exposure, inactivity, delay and lack of fluid forming a vicious circle in promoting an excessive loss of body temperature resulting in accumulative stagnation in the capillaries until a persistent low blood pressure becomes established. The blood thus lost from currency produces a state equivalent to hemorrhage and any true hemorrhage exaggerates the existent exemia. Irrespective of primary wound shock, cold, hemorrhage and toxemia will bring about the same sequence of events. As the low blood pressure continues the alkali reserve of the blood is reduced and acidosis begins. Previous starvation and fatigue favor its more rapid development. This state by locally relaxing vessels, which are not under nervous control, by weakening cardiac contraction and increasing the viscosity of the blood, tends to make worse the dangerous condition already established. The individual with acidosis is sensitized and operation and anesthesia, increasing acidosis and further lowering blood pressure, exaggerate the hazard involved in surgical procedures.

Prophylactic measures consist in providing warm alkaline drinks for the wounded at the earliest moment, warm, dry clothes, heating cabinets or devices for combating chill, sweating and exposure. Cautious use of opiates to relieve pain and to quiet restlessness; and the intravenous use of hypertonic sodium bicarbonate solution, one pint in about 15 to 20 minutes during the initial stage of the surgical procedure. Then the operation ends, not with an increase of the existent acidosis, but with an alkaline reserve provided. The blood pressure instead of being perilously lowered is actually raised during the critical period. The blood pressure may fall to some extent later, but the improved state of the patient during operations under anesthesia is unmistakable, and the subsequent course of shock cases with the precautions described has been highly gratifying.

American anesthetists, who, for some years past, have been in touch with the researches of Gatch, Mann, Yandell, Hogan, Levy and McKesson will find nothing startlingly new in the report of the Medical Research Committee. Its report, however, bears evidence that the profession-at-large is awakening to the fact that surgery and anesthesia involve many intricate problems in physio-pathology that cannot be solved with the knife or inhaler.—McM.

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THE ACTION OF ULTRA VIOLET RAYS IN DERMATOLOGIC PRACTICE.

BY

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ULTRA violet light acts as a decided irritant to the outer layers of the integument. The vitality, therefore, of numerous skin cells is decidedly damaged, and in order to take care of this damage there is a dilation of blood vessels with consequent hemorrhage as a means of removing the dead and damaged cells; in other words, resorption takes place, the destroyed epithelium being replaced through increased cell division and the very superficial layers being entirely exfoliated.

A further action of the ultra violet rays is a decided bacteriocidal action. Various bacteria are quickly annihilated. There is no doubt but that at first there is a marked increase in the number of bacteria due to the increased blood streams, but secondarily there is rapid destruction.

Ultra violet rays have a decided influence upon the cutaneous nerves, the rays being antipruriginous and nerve irritation is at once reduced. There is as well a general stimulating effect upon the entire economy, particularly when the entire body is rayed.

The rays, therefore, have the ability to produce congestion, remove exudates and cause desquamation of the epidermis.

It must also be borne in mind that systemic effects are gained by the use of ultra violet radiations on the body gener-

ally because of the production of ozone which results in an increase of oxygen in the blood stream.

It must be remembered that ultra violet absorption does not take place in the oxygen alone of the red blood corpuscles but also in albuminous substances.

The microscope in the hands of the author has demonstrated that there are practically three factors of importance which would admirably assist in explaining the action of ultra violet radiations in the treatment of cutaneous diseases, namely, thrombosis, injury to the tissues, and inflammatory reaction. This is particularly so in the treatment of naevus inflammens with the use of the Kromayer lamp. In the occurrence of thrombosis there is gradual shutting off of the blood supply to the area treated. Naturally this must follow the injury to which the blood vessel walls have been subjected after the deep penetrative radiations. In the cases microscopically studied by the author there was shown a pouring out of lymph and leucocytes, the former acting as a continual flusher of the diseased areas, and the latter, by their action of phagocytosis, assisting in the removal of the products of inflammation.

The normal cells, being of greater vitality than the abnormal ones, usually are apt to react to normal after the radiations, while the abnormal cells or those of lower tone or vitality usually succumb.

Might we not, as well, assume that there is possibly produced an autogenous reaction by the absorption of these products of inflammation which in turn must have their beneficial influence upon the growth to be removed?

REACTION OF THE SKIN TO ULTRA VIOLET RAYS.

The period of reaction varies from several to twenty-four hours, depending upon the intensity of the radiation, reddening of the skin setting in. There may be marked oedema with serious exudation producing blebs and even crusts.

In from five days to one week all evidences of the inflammatory reaction usually subsides and there is never any destructive action. It is only after reaction has taken place that decided effects upon the deeper tissues are noted.

Certain it is that the rays must influence the vasomotor system. It is, in turn, responsible for vasodilation and consequent increased blood flow, and naturally therewith the production of new cells and tissue.

PENETRATING ABILITY OF ULTRA VIOLET RAYS.

There can be no doubt of the positive proofs of the ability of ultra violet rays to penetrate deeply into the tissues. That the Kromayer lamp under compression can penetrate because of dehematization is, of course, beyond dispute. That the ultra violet rays from the Heraeus type of sun lamp can as well penetrate into the tissues can be demonstrated by observations on the ability of ultra violet rays to penetrate from the time of Finsen on down. Jansin's early experiments upon the ears of rabbits demonstrated the ability of ultra violet rays to penetrate and are well known.

Gebhardt was enabled to show the bones of the hand by photography with the use of a nine ampere lamp. Franklin and Gottheil proved conclusively the ability of the ultra violet rays to penetrate by making photographs of the body of a boy. Godneff proved the ability of the sun's chemical rays to penetrate the skin by putting silver salts in a tube underneath the skins of animals. Finsen proved the power of transillumination of concentrated light.

Schultz, in his experiments upon the power of penetration of ultra violet rays, ends his conclusions by stating that "the penetrating power of the ultra violet light is, therefore, greater for human and animal skin than previously known, and can for that reason be looked upon as a directly releasing factor in explaining the depth of action."

INFLUENCE OF PIGMENT IN THE ACTION OF ULTRA VIOLET RAYS.

It has been scientifically demonstrated that after the first exposure to ultra violet radiations there appears a dermatitis which heals with an accumulation of pigment. If after a definite time a second exposure is given of the same time and duration as the first there is no visible skin reaction.

This demonstrates the protective action of the deposited pigment against the penetration of the light rays. It must be borne in mind that the papillary layer, the blood vessels, nerves and pigment cells as well as the cells of the epithelium are influenced by the first exposure but not by the second exposure under given conditions. This shows why it is possible for the skin to become accustomed to the action of protracted exposures to ultra violet rays without further inflammatory reaction.

It must be remembered that the pigmentary deposits are extracellular and, therefore, are not permanent, and that in due course of time they are readily absorbed.

This also shows that it is impossible to produce permanent pigmentary deposits in certain diseases of the skin, such as vitiligo where there has been an absolute destruction of pigment or a lack of formation thereof.

The well-known tan brought about by exposures to the sun is the result of pigment formation. Linser claims that pigment is formed by the sebum producing cells, and that sebum and pigment are very close chemical relations, it being a well-known fact that people who are dark complected usually have a more marked sebaceous secretion.

Meirowsky is of the opinion that pigment is a production of cell nuclei which are produced independently of blood and hemaglobin.

Weidenreich is of the opinion that pigment in conjunction with sebum acts as a heat regulator for the entire economy.

Diesing presumes that the pigment in the skin causes reflection of the ultra violet rays.

One may, therefore, conclude that the pigment not merely acts as a protector against the irritating properties of the short waves of the ultra violet light, but also will explain some of the absorption effects of the rays.

PHYSICAL EFFECTS, HISTOLOGICAL AND PATHOLOGICAL
CHANGES AND BACTERIACIDAL PROPERTIES
OF ULTRA VIOLET RAYS.

Physical Effects:

The first studies of the physical effects of the sun and arc light were by Bouchard as early as 1877, who found that different colored rays affected the epidermis in quite different ways.

He found that the red rays from the sun focused upon the skin by use of a prism produced no results after thirty seconds' exposure. However, he noted that the violet rays were quite capable of producing a bleb, and that as much as eighteen minutes were needed for the green and yellow rays to product erythema. This same erythema was produced in fifteen minutes by the blue rays and in twelve minutes by the violet rays.

In modern observations with the present methods of producing ultra violet rays the same reactions are noted following the therapeutic application of the rays, and that is that the effect comes on some hours after and gradually increases for forty-eight hours when it begins to recede and is followed by desquamation which is complete in from five to eight days.

Histological Changes:

Finsen in his investigations showed the histological changes which took place in the tissues of a tad-pole when they were exposed to the solar rays. The tad-pole was surrounded with filtered paper which was first moistened with water and then studied under the microscope, after being exposed to the rays of the sun.

After ten or fifteen minutes changes began to occur. The capillaries were dilated, the blood stream slackened, and diapedesis took place, as in any ordinary simple inflammation. It was also noted that the red blood corpuscles were contracted.

In the studies of Leredde and Pautrier, erythema was produced by exposure of the skin of the arm to the rays of the electric arc. There were two exposures of seventeen minutes each.

The skin upon being exercised immediately following the exposure showed a dilation of some of the blood vessels. Another excision was followed within twenty-four hours, the epidermis showing marked evidences of vesticulation; the microscope showing marked oedema of the derma with slight suppuration of the connective tissue. There was as well dilation of the blood vessels, also of the perivascular interstices and some cellular infiltration. There was some proliferation of the fixed cells. The corneus layer was slightly exfoliated in certain areas. There was dilation of the endothelial cells showing karyokinesis. Some of the connective tissue cells were swollen and karyokinetic. Mast cells were increased and a general condition of inflammation existed. The microscopic changes further showed the influence upon the deeper structures, demonstrating the penetrative ability of the chemical rays.

Pathological Changes:

Investigation of the pathological changes in the skin brought about by the influence of ultra violet rays was made by McLeod and also by Glebowsky.

It was found that the prickle cells of the epidermis were swollen and lymph spaces were found here and there dilated so as to form minute vesicles. The blood vessels of the superficial strata were surrounded by small mononipular cells and were dilated.

Macleod's conclusions were :

First—That the action of the actinic rays upon lupus is decidedly destructive, and that this process is indirectly produced, being the result of inflammatory reaction.

Second—That the influence of the rays upon the surrounding undiseased tissue was negligible.

Third—That with judicious employment of the rays the destructive process was not of such intensity as to inhibit consequent repair, and that within forty-eight to seventy-two hours thereafter it has reached a reconstruction stage which is quite like that taking place in the healing of any inflammation.

Fourth—That the reconstruction process is quite able to replace the destroyed tissue with healthy fibrous tissue, forming a scar which is pliable, and that the surrounding epidermis recovered in toto from the secondary oedema caused by the rays.

Bacteriacidal Properties:

There is no doubt at the present time of the ability of ultra violet rays to annihilate bacteria. Downes and Blunt gave their first results as early as 1878, demonstrating that it was the chemical rays which were the most active in killing bacteria.

Finsen demonstrated that direct sun light killed the bacillus prodigiosus within one hour, while it took an arc lamp nine hours to kill a culture of the same bacteria.

He then experimented with the effects of concentrated light upon the same bacillus as well as the typhoid bacillus, and he found that these bacteria were killed fifteen times more readily by the concentrated method than by the direct effects of the light, and that the concentrated arc light was still more powerful.

The bacteriacidal influence has always been looked upon as the chief factor in radiotherapy in destroying lupus. Nagelschmidt in 1902 demonstrated conclusively that the chemical rays of light absolutely killed bacteria, and that it was because

of the inhibition of the radiation produced by these bacteria in the tissue that the morbid processes were stopped and absorption of their products became possible.

Jansen demonstrated that bacteria at a depth of two millimeters in the skin could be killed by chemical rays.

It must be borne in mind that the bacteriacidal influences of the ultra violet rays depend upon the intensity of the radiation on the one hand and resistance capacity of the bacteria on the other; also on the type and qualities of the bacteria, and that their destruction is dependent entirely on the intensity of the radiation.

WHAT DO YOU REALLY KNOW ABOUT HEALING THE SICK?

BY

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A PHYSICIAN may have spent four years in a medical college; he may have received the degree of Doctor of Medicine; he may be a legalized practitioner of medicine; he may be a member of one or more medical societies, a professor in some medical college, but what does he *really know about healing the sick?*

When a doctor graduates from a medical college, he is *supposed* to know the cause, symptoms and treatment of several hundred diseases, but how *many* can he *actually* cure?

When a young man or woman graduates from a medical college, the faculty certify to the fact that they believe that the student is *qualified* to practice medicine, but *is* he? That is a vital question that should give our teachers of medicine something to *think* about. If he or she *can't* cure the diseases common to our country, how can you *conscientiously* say that the student is qualified to practice medicine?

The professors in our medical colleges have a *fearful* responsibility on their shoulders, for it is their *business*, and it should be a matter of duty with them to see that these young men and women who are sent out from the medical colleges in large numbers yearly are prepared to treat *successfully* the diseases prevalent in our country. We have all the way from 25 to 150 professors in the medical colleges. They are supposed

to teach about all the "ologies" in the dictionary; but of what real value are all the courses of instruction, if they fail to teach the students a *definite* treatment for the diseases common to our country?

A stream is no higher than its fountain-head; if a professor in a medical college is himself unable to successfully treat the diseases prevalent in our country, it is obvious that he will be unable to impart healing skill to his students.

A physician's reputation is based, or should be based, solely upon the *cures* that he makes. His usefulness in any community *depends* upon his *ability* to heal the sick. I know from an extensive experience and observation that the *average* physician in this country is *weak on materia medica*; he has only a *superficial* knowledge of the subject. Some of our medical colleges have cut out *materia medica* from their curriculum. Thus it is that our young men and women are being sent out into the world to practice medicine without a knowledge of the *definite* curative action of drugs; they are *handicapped* in their treatment of the sick, for the simple reason that they have *not* been taught a *definite* treatment for the diseases they are certain to meet in every-day practice. Is it any wonder, then, that with this *kind* of teaching so many of our doctors become *disgusted* with the practice of medicine, and finally become medical nihilists or drugless healers? The medical colleges that fail to teach definite medication to their students, as well as those medical colleges that declare there is no such thing as a definite medication for diseases, by eliminating the Chair of Therapeutics, are largely to blame for this condition of things.

It is the custom of the merchant every year to take an account of stock to determine its quantity and value, and thereby his yearly profit or loss. It would be a good thing, likewise, for our doctors to take an inventory of stock to find out how much they *really know about healing the sick*.

Now suppose, dear reader, that an epidemic of pneumonia, typhoid fever, infantile paralysis, cerebrospinal meningitis or la grippe should sweep over this country, are you *prepared to treat* each of these diseases *successfully*? If not, then it is your *duty* as a physician to *fit* yourself to treat the above-mentioned diseases *successfully*, or else you have *failed* in your duty to *suffering* humanity. You cannot plead the *excuse* that you don't know *how* to treat such cases *successfully*, or that

you were not taught *how* to treat them in the medical college from which you graduated. There are text-books that will tell you *how* to treat such diseases successfully, and it is your *business* as a physician to *study* them, and be prepared to meet the diseased named above, as well as others—and *cure* them.

It is said it is "the unexpected always happens in medicine," and that a *good* physician should expect the best and be prepared for the worst. There are certain diseases that are liable to occur *unexpectedly*, like lightning out of a clear sky. The *good* physician is *prepared* to meet any *emergency* that may arise in the "family circle;" he is a "friend in need," a "tower of strength" in the sick room. He is the man upon whom the people have learned to *depend* when sickness occurs and death hovers over their dwelling.

Now suppose you were suddenly called to a case of tetanus, hydrophobia, blood poisoning, gall-stone colic, uremic or puerperal convulsions, would you know *how* to *treat* and *cure* such cases? You know our country is being taught the lesson of "preparedness." Now it is likewise up to us as medical men to learn our lessons of preparedness and develop the necessary skill to *treat* and *cure* the diseased conditions that may arise in *every-day* practice.

Among some of the other diseases common to our country may be mentioned cancer, consumption, diabetes, Bright's disease, spinal irritation, dyspepsia, ulceration of the stomach or bowels, rheumatism, diphtheria, tonsillitis, appendicitis, hydrocephalous, et cetera. These are diseases that may be met with at any time, and a *good* physician should be *prepared* to treat such cases *successfully*.

In this article I propose to present diseased conditions to the reader as they may be met with in every-day practice. If a doctor is able to meet these conditions and treat them successfully, it is a pretty *severe test* of what he *really knows about healing the sick*. When a doctor thoroughly knows his materia medica he will know *definitely* what to do for a sick person. It enables him to prescribe for the sick rapidly, intelligently and successfully. Remember *this fact*, and it should be burned into the *brain* of every medical man: "*That theories may change, fads may come and go, but the true, the definite indications of a remedy never change.*" They are the same yesterday, today and forever.

We prescribe a remedy because it is *the* remedy indicated

in that *particular* case. We *expect* results and we *get* them. That does away with *all* guess work and uncertainty; it reduces the *business* of prescribing for the sick down to an *exact* science, and that is what we *mean* by "*definite* medication."

You may be called to see a little child. The mother will tell you: "Doctor, this baby won't give me any peace; he *cries* all the time. The only way I can keep him quiet is to carry him; the moment I put him on the bed, he starts to cry." There is *one* remedy indicated, which, if administered, will *quiet* that child, and give the mother rest. Do you know what it is? Don't give the little baby any "dope," but give it the *indicated* remedy.

A woman may tell you she flows too much at the monthly period. That as soon as she gets up in the morning she starts to flow. The blood is dark, tarry, passing in clots. Upon examination we find inflammation of the os uteri, a thickening of the cervical canal, which is as hard as cartilage, with retroversion. She has a yellowish fetid leucorrhoea between the periods. We call it chronic meritis. The condition indicates *one* remedy, and that will cure her. Do you know that remedy?

Men at or passed the middle age are sometimes troubled with chronic enlargement of the prostate gland. Many physicians send such patients away to the surgeon to be operated on. The above condition indicates *one* remedy. If you knew that remedy, you would have many such cases to treat.

One of the most common diseases we find is spinal irritation (spinal hyperemia), but the average doctor can't diagnose it, or treat it successfully when he sees it. A cure of *one* such case will often *make* a doctor's reputation in his community. Do you, dear reader, know how to treat such cases? Very likely not, for you were not *taught how* to cure spinal irritation in the medical college you attended.

The most common condition met with in *every-day* practice is *indigestion*, and the symptoms will be as follows: In an hour or two after eating the patient will have a *sour* taste, pressure in the stomach, bloating; patient feels as if her clothes were too *tight*; wants to *loosen* her clothes. This is an American disease, and every doctor should know how to cure it. The above group of symptoms point like a finger-post to *one* remedy, and the doctor who *knows* materia medica will readily recall the remedy.

Intercostal neuralgia is another very *common* disease, but very few physicians know *how* to cure it. You will meet such cases that have been the rounds of the doctors, and they may come to you, hoping that you will be able to cure them. The above condition indicates *one* remedy, and that remedy will *cure* the patient so *quick* it will please you. Can you name this curative remedy?

You may have a case where the anus is cracked and fissured; piles protrude, bleed and are very sore. The patient walks the floor in agony of pain for an *hour or two after each stool, even after a soft stool*. This is one of the very many cases where a doctor needs just the *right* remedy to *cure* and thereby gain the *confidence* of the sick person. The above condition points directly to *one* remedy, and you, doubtless, know *that* remedy.

You may have a case of chronic diarrhoea in an old lady. She has a desire for stool in the *morning* as soon as she gets up and *moves around*. The passage is sudden, urgent, gushing, painless, with much *flatus*, and of a brown color. You will like to cure such cases when you meet them, and your patient will appreciate the cure. This condition calls for *one* remedy, and that remedy will *cure*. Can you give the name of this remedy?

Ferrum is often prescribed in anaemia when it is *not* indicated, and as a result your patient does not improve. When ferrum *is* indicated you will know it by reading the *face, tongue* and *pulse* of the anaemic patient. The face, tongue and pulse will tell you *definitely* when ferrum is indicated, and when it will *cure* your patient. Do you, dear reader, know the *definite* indications for the remedy ferrum?

In reading the pulse of a patient, you may find *quickness* of the pulse *without* strength. The patient complains of *weakness* more than any other symptom. It indicates *one* remedy—do you know what it is?

In reading the pulse of a person at or passed the middle age, we may find it *weak*, with a *marked interval* between the pulsations. This peculiar character of the pulse warns us that paralysis has already taken place some time previously, or is about to take place, and it points to *one* remedy. Do you know what it is? The knowledge may be means of prolonging the life of someone near and dear to you.

Women at the menopause may have hot flashes, weakness

and perspiration. This condition calls for *one* remedy, and that remedy will help them from the start, for it is the remedy indicated. Such cases are so common that every physician should know how to cure them.

A large majority of cases of displacement of the uterus are caused by *enlargement* of that organ, the uterus sags down from its *own weight*. There is one remedy that will *reduce* the enlargement of the uterus and help you *cure* your patient, and you *should know* what that remedy is.

An old lady may consult you about a delicate condition. She will tell you that every time she coughs, sneezes or laughs, the urine *passes involuntarily*. This indicates *one* remedy, and when you cure such a case, your patient will *appreciate* your skill.

It is *success* in curing the *little* things, the *simple* ailments of your families that helps to make you *solid* in any community. Every *cure* you make binds the people more *closely* to you.

You may be called to a case where a man has had a fall or injured his head in some way. The patient suffers from *mental trouble* since his injury. This indicates *one* remedy. Can you name it?

You may have a case of anaemia, where the pulse is *rapid, intermittent*. The patient eats well, but is *losing flesh*. This kind of pulse with the other condition calls for *one* remedy. If this is administered, your patient will get *better* from the *start*.

When you see a patient with *bloating* of the *upper* eyelids, swelling of the ankles; patient has to get up in the night to urinate, it means kidney trouble, and it points unerringly to *one* remedy.

The above are just a few cases, taken at random, that are liable to occur in any physician's practice, and embodies a fairly stiff "quiz" to find out what he *really knows* about *healing* the sick.

To be a physician is to *know* materia medica; not the materia medica of *one* school of medicine, but of *all*. When we know *all* materia medicas, we have infinite resources to draw from in our battle with disease. Over twenty-five years ago I realized what our medical colleges were *not* doing for their students, and that our doctors should be taught, first of all, the *definite* indications of remedies; also a *definite* treatment for the diseases they meet in *every-day* practice.. It was

then I began to *teach* physicians, and I have continued in such work ever since that time. I have never tried to *convert* a doctor to *any* system of therapeutics. All I did was to try to *help* him become a *better* physician, to help him do *more* for the sick than he had been doing. My book, "Definite Medication," was given to the profession in 1910, to serve as a guide in the *definite* treatment of the sick. It is now used as a daily reference by doctors in all States of the Union and in thirty-five foreign countries.

What I have written is a heart-to-heart talk with my readers, based upon an experience of almost half a century in the practice of medicine. It is an *honest* opinion of one who *loves* his profession, one who loves his fellow-man; from one so broad-minded and big-hearted that he can recognize *all* physicians as *brothers*, and extend to them the right hand of fellowship.

**EXTRACT FROM A LETTER FROM CAPTAIN JOHN D. ELLIOTT M. R. C.
WITH THE U. S. EXPEDITIONARY FORCE, SOMEWHERE IN FRANCE.**

THE work is very interesting and, although no new principles have been brought out, it is the conditions and the kind of wounds met with that have led to the advances in military surgery.

In previous wars, deductions were drawn from the taking care of bullet wounds, but to-day they are the exception; the great majority of injuries being due to high explosive shells or shrapnel. As formerly, clean cut bullet wounds are usually sterile and aseptic dressings will preserve them so, but those from larger fragments are, without exception, potentially infected, that is, practically every foreign body contains bacteria and if allowed to remain for any length of time—eight hours is a good working rule—the tissues will become infected. Early cultures from the wound will be sterile, but not so the cultures made from the foreign bodies. Therefore the aim of all surgeons over here is to remove the pieces of missile before the wound becomes infected. Then the force with which the high powered shells send fragments into the body cause an area of attrition about the track of the missile. If this tissue is allowed to remain, it will slough and of course

you know the results, so that the entire track is opened up and all suspicious tissue removed. This may be a few millimetres in width or an entire muscle may have to be taken away, so that experience and judgment are necessary to be successful. These extensive war injuries are being treated for the first time, for in former wars the vast majority of such patients died on the field, their early removal to a properly equipped hospital having been impossible.

As you know the wounds were first drained, as we used to do in civil practice, but the results were so poor that the treatment, finally known as the Carrel-Dakin method, was evolved. Of course the results were greatly improved, but, in spite of the glowing accounts we received in America, there yet remained much room for improvement. Some surgeons, principally, I think, Lemaitre, began primary suture and this has been a great success in properly selected cases, and now the great majority of wounds are so closed in many hospitals. To succeed, the operation must be performed before there is much infection of the tissues, all foreign bodies, including the fragments, pieces of clothing, etc., must be taken out and the devitalized tissue removed. Hence no wound is to be closed unless its entire extent has been examined visually. If this is done the results in competent hands are splendid, remarkably so if figures are to be relied upon to any extent, and the patients with severe injuries are again in the line within six weeks.

When any doubt about primary suture exists, it is best to do a delayed primary suture, that is, a similar operation is made, but the wound is not closed. It can then be studied clinically and with the aid of the laboratory and if all goes well, closed within two or three days and the result will be almost as good as with primary union. Of course the operation must be as extensive as if suture was to be performed immediately. If neither of these methods can be used and, undoubtedly, they cannot be applied very often during such fighting as took place during the late Boche drive, drainage and healing, either by a late secondary suture or granulation, will be much slower and the resulting deformity much greater. The English use Carrel's method in this class of cases, but some of the French are using only sterile dressings. It seems to be history repeating itself, first septic wounds, next anti-septics and finally aseptis.

The bacteriology is of more interest than the pathology, for John Hunter's description of granulation tissue and wound healing is accepted as freely to-day as when he first made it. The dangerous bacteria are the streptococci and when a wound is infected by them it is usually the old story of healing by granulation. Staphylococci are not nearly so much feared and can usually be readily controlled; while eighty percent of the wounds contain anaerobes, the big majority *B. refrigerens*, yet primary sutures are made unless they have gotten too big a start. In reality the majority of infected wounds contain both aerobic and anaerobic bacteria, but it is the streptococcus which causes serious damage.

Practically all fractures of the leg and thigh are treated with the Thomas splint from the aid station to the hospitals in the rear, in other words, from the day of injury until the bone is united. It is a simple splint to apply and is carried on every ambulance. I will certainly discard the Buck's extension and use it entirely in my future work. I would like to see us using it at Hahnemann, otherwise we will look behind the times. It is the same old splint that has been discarded for so many years.

"SLEEPING OUT."

BY

EDWIN F. BOWERS, M.D., NEW YORK CITY.

"Sleeping out" is a fine, healthy occupation, provided one is strong enough to stand it. But unfortunately, instead of being confined to the vigorous and athletic—with sound hearts, rugged circulations, and good rich blood—the fad is usually practiced by the weak and debilitated, by the tubercular, and by those who lack power of resistance.

Understand, this does not imply that fresh air is not a desirable and indispensable thing, or that the bug-killing and appetite-stimulating effects of oxygen are lightly to be regarded, or in the slightest degree disprized.

It simply means that the oxygen one gets out on the front porch or under the bare boughs of the old elm is not one whit better in quality nor quantity than the oxygen one gets while sleeping in a thoroughly ventilated bed chamber.

in a comfortable bed—preferably one he doesn't have to share with some one else.

The abuse of atmosphere is gradually being recognized by the best authorities as one of the most prevalent and pernicious vices of modern medical practice. And while the open-air treatment of the sick—especially of those sick with tuberculosis—has shown splendid and encouraging results, results which can largely be ascribed to "open air treatment," these authorities hold that had the radicalism of ultra enthusiasts only been tempered with a little warm air these results would have been even more encouraging.

All there is of "open air," "rest cure," "forced feeding," "climate chasing" and other hygienic measures for promoting health resolve themselves finally into this: To build more blood corpuscles, that increased amounts of the bacteria-destroying oxygen may be carried to diseased tissues, and to keep the victim in a climate or a condition of living in which he can secure the maximum amount of oxygen.

It is true that educating a race of air-haters as to the life-giving properties of fresh air is possibly the greatest single factor in reducing the mortality from the pallid scourge. It is also true that the 500 open air schools scattered over this country, the 575 sanitoriums modeled after the Saranac plan, the 450 dispensaries, with their thousand physicians and 4,000 nurses devoted to the open air treatment of disease, are doing a praiseworthy and useful work.

Sending patients to a climate that permits them to spend a maximum amount of time in the open air is also helpful.

But these things, splendid in themselves, have confused the real issue. They have been made the "whole thing," whereas they are only a part of the great strategic scheme for overcoming tuberculosis.

The fallacy of a special fresh air climate for tuberculosis is pointed out by state medical associations. Cities and whole districts are passing resolutions trying to control the influx of patients who look to these districts as meccas of cure. It is a matter of statistics that fully 85 per cent of cases seeking relief west of the Mississippi are fatal.

Brown says: "The practice of sending patients to health resorts, with the advice to live outdoors, to exercise freely and to consult no physicians is criminal. The best climate for any

patient is one where the demand for tissue change best coincides with the patient's powers for response."

The difference of not more than 10 degrees in temperature will frequently work the change between stimulation and exhaustion.

And notwithstanding that great stress is laid upon the beneficial effects of the dry air of mountainous regions, the truth is that there is less oxygen to a cubic foot of this air than there is at lower levels, and, anyhow, of what use is an "excess of fresh air" anywhere between sea level and mountain top to those whose red corpuscles do not absorb and carry the oxygen?

Every one should have absolutely pure air—all of it he can possibly use during twenty-four hours of every day. But it should be warmed to a temperature bearable by human beings.

REPORT OF THE DEAN OF THE HAHNEMANN MEDICAL COLLEGE OF PHILADELPHIA FOR THE YEAR 1917 AND 1918.

THE Hahnemann Medical College of Philadelphia has been efficiently and economically maintained during the college year which has just ended.

This has been very difficult to do with twenty-three members of the Faculty in the Government service and all expenses much greater than ever before. Indeed this would have been impossible without the personal sacrifice and active cooperation of the remaining members of the Faculty and the generous financial support of friends of The Hahnemann Medical College.

Mr. Walter E. Hering, chairman of The College Committee of the Board of Trustees, deserves special credit for the present good financial condition and also Dr. William B. Van Lennep, who obtained a \$40,000 endowment from the late Marcus M. Darr; the income from \$30,000 of which will be used for maintenance of the college during the war and then for a special purpose to be announced later. Some friends of the college who had subscribed to The Hahnemann Base Hospital, which was offered the Government, permitted their subscription to be used for the college.

BASE HOSPITAL.

It is unfortunate that the Hahnemann Base Hospital was not accepted by the Government and it is certain that the chief reason why it was refused was because The Red Cross were only authorized to organize fifty Base Hospitals and forty-seven had been accepted when The American Institute of Homœopathy offered three Base Hospitals, Hahnemann Philadelphia, Hahnemann Chicago and Metropolitan New York.

The Metropolitan Base Hospital was accepted as Number 48 and the two remaining vacancies were given to Seattle and St. Louis which previously had no Base Hospitals authorized in their respective states.

EDUCATIONAL REQUIREMENTS TO STUDY MEDICINE.

No first class medical college in the United States will now admit a student to the freshman medical class until he had had two years of college instruction in addition to a full four year high school course. This is the minimum requirement of The Association of American Medical Colleges as well as The Federation of State Boards of Medical Education and Licensure. The Hahnemann Medical College or no other Medical College has any choice in the matter and will continue to be maintained on the highest educational plane. In order to comply with this edict and be able to receive students direct from high school our School of Science has been organized.

SCHOOL OF SCIENCE.

The charter of The Hahnemann Medical College and Hospital of Philadelphia provides legal authority to give "Instruction in Medicine, Homœopathy, Surgery and other Sciences, and instruction necessary, incident and appertaining thereto."

The Hahnemann School of Science is designed to give the high school graduate the instruction necessary for admission in any first class medical college and to furnish a comprehensive scientific foundation upon which to build a modern medical education.

The modern physician must be able to apply modern science to the treatment and elimination of disease. Samuel

Hahnemann, Constantine Hering and many other prominent Homœopathic physicians have realized the necessity of a solid scientific foundation.

Modern science appertaining to medicine requires proper presentation and this is thoroughly done in the Hahnemann School of Science. Chemistry, Biology and Physics are the three sciences essential, while such subjects as English, modern foreign languages, Mathematics, History of Medicine, Medical Terminology, Drawing, Microphotography, Medical Botany and Pharmacognosy are cultural subjects of much practical value to all contemplating the study of medicine.

The student is given a good course, not only in College Chemistry, but in Qualitative Analysis, Quantitative Analysis and Organic Chemistry. From long personal experience I know that no medical student can obtain a satisfactory knowledge of Physiological Chemistry, Clinical Chemistry and Toxicology without this special training.

In Biology the School of Science students obtain a splendid foundation for Anatomy, Entomology, Histology and Pathology. A comprehensive view of the animal kingdom is obtained and students do laboratory dissection of type forms including fish, the frog, the turtle, the pigeon and the cat. Entomology is also studied, a knowledge of which is so important for the physician.

In Physics the theories of mechanics, wave motion, sound, heat, magnetism, electricity, radio-activity and light are thoroughly presented by didactic lectures, demonstrations and ample laboratory work. The great advantage which this course gives to medical students is self-evident. Physical Chemistry is also taught and the many applications in modern medicine pointed out.

Instruction in The Hahnemann School of Science is given by a separate Faculty composed of high grade teachers. No apology is necessary for the School of Science and comparison with other colleges is invited. No pains or money have been spared to make the course second to none.

The Physical Laboratory has been equipped with all necessary apparatus for laboratory work and lecture demonstrations. The special apparatus includes a Hydrogen Ion Concentration Apparatus of the latest type, an X-Ray machine, Storage Batteries, Six Analytical Balances, Air Ther-

monometer, Seconds Clock, Influence Machines, Motors, Barometer, Relative Humidity Outfit, Galvanometers, Wheat Stone Bridges, Polariscope, Spectrocope, Calorimeter, Projectoscope, Gryscopic Apparatus, Microphotographic Apparatus, Microscopes, etc., etc.

The Department of Chemistry consists of four rooms; the main chemical laboratory, laboratory of Quantitative Analysis, Research Laboratory and the chemical supply room. Each student is given a separate locker containing the apparatus needed and additional apparatus and chemicals can be obtained from the supply room at any time.

Laboratory for Biology and Medical Botany is well supplied with apparatus and material necessary for this work. Sixty excellent compound microscopes, thirty dissecting microscopes of the latest types, a lantern which may be used with slides, as a projectoscope or directly with the microscope, numerous charts and a supply room for staining material, supplies, microtomes and incubator.

Four lecture rooms are at the disposal of The School of Science.

Special mention should be made of the course in Medical Botany and Pharmacognosy which gives the student the great advantage of an intimate knowledge of the plants used in medicine. (An exhibit of many fresh medicinal plants and a large amount of special scientific apparatus was shown and created much interest.)

CO-EDUCATION.

Co-education at The Hahnemann Medical College has been proposed a number of times and recently The Board of Trustees have twice expressed themselves as being in favor of it.

I am not going to present the arguments pro and con for you are all as well prepared to do this as myself.

Jeannette Rankin in her splendid address before the graduating class made a strong plea for co-education. I would, however, simply ask this Alumni Association to express an opinion to-day in regard to the advisability of admitting women. The fact that we shall have a very small freshman class this fall owing to the increase in entrance requirements

and on account of war conditions, also that five young women have expressed their desire to enroll now should be kept in mind. (A long discussion in regard to co-education was held and a vote taken. 27 voted against co-education and 25 for co-education.)

ALUMNI DIRECTORY.

A complete directory of The Alumni of The Hahnemann Medical College has just been completed by Dr. Thomas Lindsley Bradford, our noted Librarian, and this is now ready for distribution. Dr. Ralph Bernstein has largely assumed the financial responsibility of publication and those who have previously subscribed may obtain copy for two dollars and those who have not subscribed may obtain a copy for three dollars until the limited edition is exhausted. Much credit belongs to Dr. Bradford for this splendid work which has required about two years of labor. Dr. Bradford has also much more comprehensive data in regard to Hahnemann Alumni. Every newspaper article of importance concerning Hahnemann Alumni has been clipped during the last twenty years and these have been pasted in many volumes of scrap books. These have been presented to The Hahnemann Medical College.

SEAL OF ALLENTOWN ACADEMY.

Through the kindness of Dr. Joseph Guernsey the original seal of The Allentown Academy, the Faculty minutes and other historic documents have been presented to The Hahnemann Medical College. A description of this seal may be found in The Hahnemannian Monthly for May 1918.

PROSPECTS FOR NEW STUDENTS.

The freshman medical class next year will be small for two important reasons.

The entrance requirements have been increased from one year college work to two years of college work.

The attendance in the various preparatory colleges has been less than for many years, because so many young men have entered the military service. It is certain that two-

thirds of all the young men attending preparatory colleges have joined the colors. This is a splendid tribute of loyalty to the young men of the country but unfortunately the demand for physicians is now so great that there is serious danger in store not only for soldiers and sailors but also for the civil population of the United States, Canada, England, France and Italy.

It is difficult for a young man with red blood in his veins to realize that he may be of much greater value to his country by studying medicine than in enlisting at once. Realizing these facts the Government has made provision to enroll all medical and medical preparatory students in the Medical Enlisted Reserve Corps and permit them to finish their medical education before entering the military service. We do not want a single student in The Hahnemann Medical College or Hahnemann School of Science who is a "slacker" and is enrolling simply to escape military duty temporarily. Any such will not be enrolled.

SCHOLARSHIPS.

A modern medical education is almost impossible for the young man with very limited resources and this year twelve young men who would have been unable to continue their courses have been kept in school through the kindness of friends. The classes of 1887, 1896 and 1905 have each paid the tuition of one student. The Women's Homœopathic League have kept four young men in school. Mr. Barney, Mr. Hering, Dr. Palen, the Pittsburg Alumni and The Northwestern Branch of Hahnemann Alumni Association have all assisted deserving students.

FACULTY.

The Faculty of The Hahnemann Medical College deserve special praise for loyalty and their hard work during the past year. Many sacrificed a great deal to fill their college obligations. Many are caring for the practice of those in the service. Many have willingly done more college work than before and all have shown a willingness to assist in doing the work of Faculty members who are in the service. The Faculty has passed a resolution to the effect that all members

of the Faculty who are in the service shall have their college positions retained for them until a reasonable time after the war.

ROLL OF HONOR.

On page five of the Hahnemann Medical College catalog which is just published may be found the names of twenty-three members of the Faculty who offered their services to the Government. Two of these, Dr. Walter H. Conrad and Dr. R. Franklin Hill, have died in the service. No words can adequately express the fine spirit these and the many other Alumni have shown. Great personal sacrifice has been necessary but they have heard the call and have responded.

It is a source of especial pleasure to report that every Alumnus of "Old Hahnemann" now in military service has demonstrated his ability in a very practical way and is now respected and honored not only by former friends but by the authorities at Washington. More members of the Faculty and Alumni are going.

They deserve our highest respect, our gratitude, our admiration and our love.

Wm. A. Pearson, M.D.

GRADUATES OF THE HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA WHO ARE IN THE MEDICAL SERVICE OF THE UNITED STATES.

(This list is compiled from the Honor List in the Journal of the American Medical Association of June 1, 1918.)

COMPILED BY THOMAS LINDSLEY BRADFORD, M.D.,
PHILADELPHIA.

COLORADO.

Hood, Joseph Robinson (1898), Denver (Golden).

CONNECTICUT.

Haller, Charles Pickhardt (1902), Bridgeport.
Moore, Howard DeLane (1893), Danbury.
Rowell, Edward Everett (1899), Stamford.
Smith, Charles Seaver (1916), Shelton.

DELAWARE.

Pierce, Willard Richardson (1909), Milford.
Roth, Robert Ray (1899), New Castle.
Spackman, James Guie (1912), Wilmington.

DISTRICT OF COLUMBIA.

Buchanan, William Ralph (1902), Washington.
King, Harry Clifton (1907), Washington.

ILLINOIS.

Taylor, William Henry (1895), Chicago.

IOWA.

Aborn, Claude Elmer (1908), Cedar Rapids.

LOUISIANA.

Bowie, Eleazer Robinson (1914), New Orleans.
Verdier, Charles Edwin (1904), New Orleans.

MARYLAND.

Hoffmeier, Frank Newcomer (1903), Hagerstown.
Shorkley, Thornton Moore (1904), Kensington.
Wilson, George Hiram (1903), Eckhart Mines.

MASSACHUSETTS.

Dobson, Charles Henry (1897), Conway.
Schley, William Sullivan (1905), Everett.

MINNESOTA.

Williams, Arthur Bent (1902), Wilmont.

MISSISSIPPI.

Walker, Charles Emmett (1873), Jackson. (Not sure
of our grad. but the name is as quoted on the Honor
List.)

NEW JERSEY.

Bitler, Joseph Clarence (1899), Hammonton.
Browning, W. Kempton (1897), Camden.
Black, Marmion Stanley (1907), Elmer.
Buck, Abijah Orange (1890), Elizabeth.
Campbell, Stephen (1915), Woodbury.
Chalfant, Harry Bailey (1908), Mullica Hill.
Chalfant, William Paxson (1902), Barnesboro.
Conover, Charles Higbee (1899), Tuckerton.
Fox, Roger Talmage (1915), Gloucester City.
Hilliard, William Thomas (1903), Salem.
Leighton, Robert LeRoy (1913), Spring Lake.
Lingle, Charles Percival (1911), Arlington.
McKinstrey, Herbert Sydney (1917), Camden.
Phillips, Thomas Wolden (1916), Camden.
Reeves, Abram Carl (1905), East Orange.
Rink, William Eugene (1903), Burlington.
Satterer, William (1903), Newark.
Seibert, Raymond Smith (1909), Trenton.
Shemeley, William Glovier (1910), Camden.
Shoemaker, James Leo (1917), Camden.
Thomas, Claude Wellington (1903), Woodstown.
Voorhis, Charles Francis (1913), Palmyra.
Webb, Henry Pratt (1913), Deerfield Street.
Woodhouse, Alfred (1904), Newark.

NEW YORK.

Bieber, Edgar (1911), Byron.
Bishop, Howes (1889), New York City.
Blood, Raymond Gregg (1917), New York City.
Ganow, George Jesse (1893), Port Dickinson.
Gould, Clarence Bentley (1907), Batavia.
Gram, Irving Franklin (1917), Buffalo.
Hetrick, Llewellyn Evans (1898), Brooklyn.
Lane, Charles W. (1916), Buffalo.
Miller, John Daniel (1903), Little Falls.
Powick, Thomas Heister (1916), Buffalo.
Randall, Edward Gove (1898), Waterville.
Scott, Robert Case (1899), Syracuse.
Sharp, John Preston (1915), Niagara Falls.
Skeoch, James R. (1917), New York City.

NORTH DAKOTA.

Deming, Ralph (1902), Mercer.

OHIO.

Claypool, John Blayney (1893), Mt. Vernon.
Hatfield, Walter Heron (1911), Cincinnati.
Junkermann, Edgar Burnett (1917), Columbus.
Rogers, William Norwood (1898), Hamilton.

OREGON.

Besson, Linford Shepherd (1915), Portland.

PENNSYLVANIA.

Allen, Henry Croskey (1899), Schwenksville.
Allen, John Vincent (1917), Scranton.
Armstrong, Ralph Harrison (1916), Peckville.
Armor, Russell Bigler (1898), Pittsburgh.
Abbott, Charles Shewell (1892), Bristol.
Atkinson, Paul Gregory (1917), Pittsburgh.
Barclay, Hugh Bailey (1901), Greensburg.
Bartine, Charles Orin William (1903), Philadelphia.
Bauman, Frank Diemer (1910), Philadelphia.
Batteiger, Fred Oliver (1911), Greenville.
Baker, Harry Loyal (1910), Catasauqua.
Baier, George Frederick (1906), Philadelphia.
Barron, Charles Albert (1899), Philadelphia.
Barthmeier, Frank Ferdinand (1910), Philadelphia.
Barthmeier, Othmar F. (1906), Philadelphia.
Bierman, Henry (1888), Bloomsburgh.
Brown, Robert Bahner (1917), Pittsburgh.
Bradin, Carey Clarence (1912), Tyrone.
Browne, William Campbell (1899), Burnside.
Bert, James Bebout (1912), Philadelphia.
Bigler, Charles Albert, Jr. (1902), Philadelphia.
Boggs, John Waldo (1904), Lawndale.
Busler, Howard Sherwood (1911), Phila., Lansdowne.
Cloud, Charles Higginson (1899), Philadelphia.
Calvin, Webster H. (1904), Hollidaysburg.
Cottom, Thomas Irving (1912), Carnegie.

Cowell, Selden Sylvester (1909), Huntsdale.
Crosby, Albert Vincent (1904), Lewistown.
Crawford, William Lewis (1904), Dillsburg.
Davis, Earl Rice (1917), Scranton.
Davis, Elwood Linnell (1906), Glenburn.
Douglas, James Nelson (1905), Scranton.
Doyle, Thomas Lawrence (1916), Tremont.
Elliott, John Dean (1901), Philadelphia.
Edmundson, Thomas Perrine (1912), Pittsburgh.
Enion, George Alexander (1913), Philadelphia.
Evans, Russell Morrison (1913), Pittsburgh.
Flanigan, Andrew, Jr. (1912), Philadelphia.
Fox, Charles Stewart (1917), Philadelphia.
Fries, Charles Joseph Valentine (1912), Philadelphia.
Fries, Victor Joseph Bernard (1909), Philadelphia.
Fulmer, Charles LeRoy (1916), Philadelphia.
Gates, William Dunn (1896), Indiana.
Guie, Dersifor Frazier (1910), Manheim.
Getze, George Wilbur (1906), Tarentum.
Gerhardt, Paul Henry (1908), Reading.
Golding, Edward Knight (1911), Reading.
Hartley, Arthur (1891), Philadelphia.
Hill, Richard Franklin (1909), Philadelphia.
Hoke, Bradley Hartman (1901), Coalport.
Hanley, Clare Heilner (1905), Scranton.
Harvey, David Gaston (1894), Huntington Valley.
Humes, John Huey (1902), McKees Rocks.
Handwork, Andrew Jackson William (1908), Altoona.
Hollis, Charles Biddle (1912), Philadelphia.
Jack, Horace Wesley (1917), Philadelphia.
Kirkpatrick, George Houston (1911), Wilkinsburg.
Knauer, John Glenwood (1915), Reading.
Krick, George William, Jr. (1913), Reading.
Kenworthy, Joseph Miller (1906), Philadelphia.
Killen, Ralph Dunleavy (1913), Philadelphia.
Knight, Isaac Warner (1903), Philadelphia.
Lewis, Clarence Jarrett (1891), Philadelphia.
Lynch, William Joseph (1909), Philadelphia.
Lee, Arthur (1902), Philadelphia.
Leslie, Edward Clyde (1901), Pittsburgh.
Logan, James Clark (1902), Pittsburgh.
Lotz, Arthur King (1917), Hollidaysburg.

Lang, Walter Emery (1910), Allentown.
Lewis, Harry Harrison (1913), Ashland.
Mateer, Harry Oliver (1912), Pittsburgh.
Martin, William Joline (1899), Wilkinsburg.
McComb, John Paul (1913), Bellevue.
MacKenzie, Arthur Lee (1902), Philadelphia.
McCutcheon, John Harvey (1913), Philadelphia.
McKenna, John Joseph (1905), Philadelphia.
Metzger, Harry Philip (1916), Philadelphia.
Mills, Thomas David (1917), Philadelphia.
Miller, Joseph Stanley Maleski (1917), York.
Morton, Dudley Joy (1907), Philadelphia.
Murdock, Robert Harrison (1913), Wilkes-Barre.
McCoy, Charles Milton (1904), Lewistown.
Meley, Edward Jewett (1906), Turtle Creek.
Noll, Pius Albertus (1906), Glen Rock.
Neumuller, Maurice Henry (1902), Lansford.
Perrine, James Kingsland Morange (1893), Pittsburgh.
Parker, Brantley Fuller (1903), York.
Post, Joseph Walter (1909), Philadelphia.
Peterson, Reuben Axil Emanuel (1916), Allentown.
Powell, William Chambers (1879), Bryn Mawr.
Piper, William Scott (1904), Clearfield.
Perkins, Roscoe Livingstone (1907), Harrisburg.
Pilgrim, Ralph Edward (1917), Chester.
Pitcairn, Edward Alexander (1912), Wilkinsburg.
Pratt, Charles Ira (1914), Coatesville.
Palmer, Charles Rees (1893), West Chester.
Pettler, Samuel Henry (1912), New Brighton.
Reeves, Samuel Winchester (1909), Fawn Grove.
Read, Harry Malcolm (1915), York.
Rinehart, Stanley Marshall (1891), Pittsburgh.
Roberts, Linford Brooke (1916), Quakertown.
Reitz, Charles Benjamin (1913), Allentown.
Reading, John Herbert (1917), Philadelphia.
Rile, Walter Bright (1902), Philadelphia.
Roepke, Harry Frank (1916), Philadelphia.
Rowland, Charles Andrew (1916), Chester.
Robinson, Carl Howard (1908), Ford City.
Richards, Frank Llewellyn (1898), Berwyn.
Sample, Clyde Wilfred (1903), Wilkinsburg.
Swick, Jesse Howard (1906), Beaver Falls.

Schantz, Henry Franklin (1891), Reading.
Snyder, Thomas Millette (1916), Reading.
Seraphin, Alfred Roman (1917), Pittsburgh.
Simpson, Carl Stanley (1903), Pittsburgh.
Stockton, Harry Thomas (1908), Marcus Hook.
Stackhouse, Joseph Armin (1911), Erie.
Sweeney, John Joseph (1911), Heckscherville.
Sayres, Gardner Atlee (1909), Lancaster.
Schwartz, Grover Cleveland (1909), Lancaster.
Strickler, Alfred Desch (1915), Lebanon.
Straub, Hiram Grant (1917), Minersville.
Saul, Charles Dudley (1901), Philadelphia.
Seitz, James Steward (1917), Philadelphia.
Sewell, Lemuel Taylor (1911), Philadelphia.
Shannon, Hugh Murdock (1907), Philadelphia.
Shute, Furman Robbins (1899), Philadelphia.
Stedem, Daniel E. L. (1915), Philadelphia.
Steinhilber, Edward Austin (1909), Philadelphia.
Sylvis, William Martin (1907), Philadelphia.
Tait, Charles Hill (1906), Philadelphia.
Tompkins, James Francis (1915), Philadelphia.
Tyler, Everett Allen (1913), Philadelphia.
Thomas, Frank Donaldson (1912), Dorrancetown.
Truxal, Cyrus Walter (1913), Wayne.
Vail, Howard Locke (1903), Dalton (Saranac Lake).
Van Derveer, Warren Abbe (1917), Philadelphia.
Walther, Rudolph Albert (1917), Philadelphia.
Wetmore, Stephen Smith Percy (1904), Morrisville.
Webster, George C. (1893), Chester.
Weaver, Grant Bixler (1906), Lancaster.
White, Benjamin Franklin (1907), Bradford.
White, Howard King (1909), Philadelphia.
Wittman, Paul Carl (1916), Philadelphia.
White, Robert Vandenburg (1901), Scranton.
Yale, Arthur Wells (1899), Philadelphia.
Yerger, Louis Brinton (1914), Philadelphia.
Yost, Charles Benjamin (1910), Bloomsburg.
Yocum, Charles Alvin (1885), Reading.

VERMONT.

Everett, Frank Henry (1906), Castleton.

VIRGINIA.

Trow, Walter Gordon (1906), Warrenton.

WASHINGTON.

Betts, Charles Allen (1895), Seattle.

Palmer, Willard Grant (1911), Seattle.

WEST VIRGINIA.

Edmundson, Richard H. (1890), Morgantown.

WISCONSIN.

Schneider, John Ferdinand (1907), Oshkosh.

STATE BOARD EXAMINATION. PENNSYLVANIA, JULY, 1918.**PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.**

1. Outline briefly the postmortem findings following a fatal disease in some particular case under your observation.
2. Describe bone necrosis; also, the method of repair following a fracture.
3. Name the ductless glands giving the function of each.
4. Give the predisposing causes and the pathology (a) of aneurysm; (b) of varicose veins.
5. Explain the alteration in function (a) in cyanosis; (b) in glaucoma.
6. What is meant (a) by upper neuron? (b) lower neuron? What type of paralysis is characteristic of each?
7. What is the physiologico-pathological significance of Argyll-Robertson pupil? Hunch-back? Diplopia? Nystagmus?
8. By what feature in the investigation are these bacteria identified: gonococci? Klebs-Loeffler bacilli? Typhoid bacilli? Spirochete of syphilis?
9. Name five antiseptics giving their strength for use and relative value in service.
10. Describe briefly the types of kidney lesions in which

the functional capacity of the organ is dangerously impaired. Indicate the findings in urinalysis of each type.

DIAGNOSIS, SYMPTOMATOLOGY, TOXICOLOGY, MEDICAL JURISPRUDENCE.

1. What are the symptoms of typhoid fever (a) in the first week, (b) in the second week? Differentiate typhoid fever from some one confusing disease.
2. Differentiate measles from scarlet fever and name the principal complications of measles.
3. What is meant by loss of compensation in diseases of the heart? What are its main symptoms?
4. What is the significance of bleeding from the mouth? How would you determine its possible sources and causes in three varieties of blood spitting?
5. Differentiate iritis from acute inflammatory glaucoma.
6. Give the symptoms and physical signs of lobar pneumonia and differentiate it from subacute pleurisy with effusion.
7. What are the symptoms of erysipelas? Differentiate it (a) from erythema simplex and (b) from acute eczema?
8. If poison is found in the stomach contents, what other evidence is necessary to sustain satisfactory proof of death by poisoning?
9. What are the signs of death (a) by strangulation? (b) by drowning? (c) by fractured skull? (d) by internal hemorrhage?
10. What are the early symptoms of acute poliomyelitis before paralysis? About when does paralysis occur?

OBSTETRICS AND GYNECOLOGY—PHYSIOLOGICAL CHEMISTRY.

1. Should a woman with a deformed pelvis (early in pregnancy) engage your services, name the three most important methods by which you would aim to secure her a living child? In each instance name the limits of measurement of the conjugate vera.
2. Given a pregnant woman (within the first three months) of doubtful intra-uterine or extra-uterine location, describe in detail how you would determine the correct diagnosis.

3. During the birth of an infant what dangers threaten it? Name the three most important dangers and discuss their prevention.

4. How would you deduce the presence of uterine cancer? (a) early? (b) late? Describe carefully the difference. Name the most important method of treatment.

5. Name the distinguishing points of difference between uncomplicated retro-displacement of the non-gravid womb, a small uncomplicated pelvic tumor and fecal content of the lower bowel.

6. When is the induction of premature labor justifiable? In any three cases in which you would consider the advisability of performing any other operation, explain in detail why you would prefer them to premature labor.

7. If, at the third month, a primipara should engage you to care for her through the period of gestation and labor, give in detail your care of the case, including measurements and tests.

8. What symptoms would lead you to the apprehension of an oncoming attack of eclampsia before the convulsions set in? What measures would you take to prevent the threatened attack?

9. Discuss the thyroid gland from the chemical and therapeutic standpoint.

10. (a) What are the most prominent constituents of commercial meat extracts? (b) What is the nutritional value of such extracts?

ANATOMY AND SURGERY.

1. What are the early symptoms of hip joint disease? What is the anatomical explanation of each of these symptoms?

2. State the avenues and possible points of metastasis of malignant growth of the breast. Upon what symptoms may an early diagnosis of cancer of the breast be based?

3. State the varieties and causes of hemorrhoids, together with the complicating surgical conditions which may follow their presence. Mention two operations for their cure.

4. Given a severe scalp wound, upon what would you base your opinion as to the safety of immediate closure of the wound?

5. What conditions would demand a circumcision (a) in the child? (b) in the adult? Describe the operation.

6. State in detail the conditions necessary to be present which would warrant the amputation of an extremity. State the structures severed in an amputation through the middle of the arm.

7. How is Colles' fracture produced? What displacements occur and what is their anatomical explanation? State the method of reduction of the fracture.

8. Describe the principles involved in the Carrel-Dakin treatment of wounds. Give a detailed description of the application of the method. Point out the essential differences between this method and the dichloramine T method.

9. Detail the possible traumatisms produced in a sprain of the ankle. Outline the principles involved in its treatment and the method of securing the result.

10. State the conditions caused by gonorrhea that may require surgical intervention (a) in the male, (b) in the female. State what operation would be indicated in each instance.

PRACTICE—MATERIA MEDICA AND THERAPEUTICS—HYGIENE
AND PREVENTIVE MEDICINE.

1. Name the principal alkaloids in opium.

How would you treat a patient addicted to the use of opium?

2. How would you treat:

(a) Diarrhea of cholera infantum?

(b) Diarrhea of an acute gastro-enteritis?

(c) Diarrhea of tubercular disease of the intestinal canal?

3. What medication might be employed in the treatment of chronic digestive inadequacy?

What articles of diet would be indicated and what ones contra-indicated, especially where fermentative action is pronounced and symptoms of autointoxication are present?

4. Outline the treatment of (a) chorea; (b) locomotor ataxia.

5. Name two conditions under which each of the following named remedies might be used and give the rationale of their administration:

- (a) Oleum Terbinthinae,
- (b) Oleum Tiglii,
- (c) Camphora,
- (d) Atropine Sulphate,
- (e) Argenti Nitrates.

6. Outline the treatment of pernicious anemia and of simple anemia.

7. Discuss the subject of the treatment of pain as it may present itself in the course of any three diseases of your own selection.

8. Discuss the subject of the prevention and treatment of syphilis.

9. Give the average and the maximum dose of the following named drugs:

- (a) Hyoscyamine hydrobromide,
- (b) Corrosive mercuric-chloride,
- (c) Santonin,
- (d) Tincture of digitalis,
- (e) Tincture of aconite,
- (f) Strophanthin,
- (g) Fluid extract of ergot,
- (h) Caffeine,
- (i) Amyl nitrate,
- (j) Dilute hydrocyanic acid.

10. Discuss the therapeutic application of sodium bicarbonate, of sodium chloride and of sodium benzoate.

ANTITOXINE, ITS NATURE AND EFFECTS.

BY

F. H. LUTZE, M.D., BROOKLYN, N. Y.

THE composition of antitoxine is generally well known by this time; it is the fluid part of the blood of a horse, that has previously been injected several times with the germs or products of disease taken from a patient sick with diphtheria. To this carbolic acid is added to prevent putrefaction of the serum of the horse's blood.

This then is injected subcutaneously into any patient sick with diphtheria, (the same food, the same clothing, the same medicine for all young and old, lean or stout) and even in-

jected into persons in good health to prevent diphtheria, treating the disease according to its name instead of the patient, the only one, who can be treated. That many persons thus treated, died suddenly did not deter them from continuing the treatment.

When this method of treating diphtheria was first announced, with the claims of a great discovery, before it had been really tested fully, and in spite of the many deaths resulting therefrom, several Homœopaths of Brooklyn, N. Y., thought they ought to test it on themselves, while being in good normal health, according to the teaching of Hahnemann, to learn the pure effects of this new preparation upon the healthy human organism. A number of the members of the Homœopathic Society of the County of Kings, N. Y., formed themselves into a proving society and began taking antitoxine internally by way of the mouth, as Hahnemann taught us and nature intended all food and medicines should be taken, and found the results to be a proving of carbolic acid pure and simple. This then proves that the serum, from which the discoverers and adherents of this new fad expecting such wonderful results, produced at least, when taken by way of the mouth internally, no medicinal effect whatever, and carbolic acid was the only acting agent. To those who doubt this but believe in the virtue of the serum, I say "You must prove the curative power of the serum, by giving this alone and pure without any carbolic acid or any admixture whatsoever, then if there be any virtue in the serum it will show itself and demonstrate its value. I myself am very sensitive to the action of medicines, the odor of carbolic acid will cause in me in a minute or two one of its very characteristic symptoms: "Fullness in the forepart of the head like a burning ball" and if the serum had any power to produce or cure symptoms, I most certainly would have felt them, differing from those of carbolic acid. The serum therefore has alone by itself no medical virtue, no power to cure whatsoever and is entirely inert. When antitoxine cures, it does so, because carbolic acid is the homœopathic remedy of the patient and not because of the virtue of the serum.

Here follow some of the symptoms produced on us provers, while testing or proving antitoxine:

Head: Great fullness in the forepart of the head like a burning ball, worse from light and noise. Pressing, jabbing

pain in the head, worse on going up or down stairs, relieved by binding up the head.

Vertigo, worse from motion, relieved somewhat by going in the open air.

Nose: Bloody mucus is blown from the nose.

Mouth: White or gray membrane on lips, gums and pharynx, at times ejected from the mouth. Bloody foam before the livid, pale lips.

Burning at the tip of the tongue.

Throat: Frothy mucus frequently ejected from the throat. Putrid or tarry odor of the breath. Uvula white and shriveled. Saliva copious, bluish-white, frothy.

Taste: Nasty, horrid, pungent, coppery, metallic.

Palate: Relaxed, causing noisy breathing; white mucus hawked up from posterior nares. Soreness and burning on right side of throat, pain on right side when swallowing saliva, also from pressure externally on right side of throat. Diphtheritic membrane extending to mouth and nose; great thirst.

Stomach: Nausea mornings while eating breakfast. Frequent spitting with desire to belch. Retching and vomiting on rising in morning. Drinks much and shudders. Vomiting of a white creamy substance. Burning in and heat rising from the stomach.

Abdomen: Distress in abdomen when lying on either side, better lying on back, with legs drawn up. Rumbling and rolling in abdomen.

Stools thin like a tape, dark; as thick glue mixed with currant seeds.

Urine: Stains linen like red wine; urine involuntary, almost black.

Cough hacking, with tickling in throat or upper trachea.

Back and neck, and limbs; soreness of muscles of limbs, back and neck.

Skin: Pale, cyanotic, livid; vesicles all over the body; itching relieved by rubbing. Nettle rash.

If a few of the above symptoms are present in a patient ill with diphtheria or any disease, a very small dose of a potency of carbolic acid will cure quickly and perfectly.

When doctors inject antitoxine into any person, they only think of the serum and the good results they expect from this, but forget entirely, that carbolic acid, a virulent and

active poison, is a part of it. In 1880-1882 carbolic acid was employed very much by surgeons as an antiseptic and led very often to the poisoning of both the surgeon and patient. These experiences have produced many of the symptoms indicating its use in the treatment of the sick. It destroys life by producing paralysis of the heart and respiration, preceded by vertigo, roaring in the ears, profuse sweat, contracted pupils, collapse and death. Very many patients, especially children, but even adults in good health have died in this way, after an injection of antitoxine.

A man kissed his little daughter before going to business in the morning. Two hours later, learning that his child had diphtheria, he called at his physician's office, to have antitoxine injected into himself as a prophylactic. A few minutes after the injection had been given, he exclaimed: "My Lord, what kind of stuff is that, I cannot breathe," and died a few minutes later in the doctor's office, from paralysis of the heart and respiration, due to the poisoning by the carbolic acid contained in the antitoxine.

Not long since, a little boy playing in the street in Brooklyn, N. Y., was chased into his home by a passing (family) physician and injected with antitoxine (probably with the consent of the parents) to protect him from diphtheria. He died from the effect of this a day or two later. That antitoxine or any other remedy has the power to protect any one thus treated from diphtheria or any other disease, is nothing but a silly, ridiculous theory, impossible to be proved, for they might never get the disease, had they never been thus protected. It would be interesting and instructive to know how many persons would get sick with diphtheria or typhoid fever, if no such so called protective treatment had been used.

Three gentlemen told me lately, that they each lost a child, sick with diphtheria after injections of antitoxine. Their throats cleared soon after, but they died a day or two later.

The blame for these deaths can not be laid to post-diphtheritic paralysis for if they had been properly treated and actually cured, post-diphtheritic paralysis could never have occurred.

A young man, a civil engineer, 24 years of age, was drafted for the Army, passed the Board of Examining

Physicians as sound and healthy. He entered the service and received the now fashionable injections of various serums, and died a short time later. This was related to me by a doctor, an intimate friend of the deceased.

"THE PASSING OF THE IDEALIST"—A REPLY.

As a member of the State Society and a Homœopathic physician I must offer my objections to the article published by the *HAHNEMANNIAN* in these times of doubt, written by Dr. H. L. Northrop. While everyone of us agrees with some things he says, the article has been quoted in my hearing in official circles to the detriment of our sect.

The article is far from the experience of many of us and to rate a service problem in such broad terms shows little business ability. It is a pity that all persons do not require surgery but my results obtained from 500 questionnaires prove conclusively that the homœopathic prescription alone will fill 51 per cent. of all service problems in practice.

Of the lethal pathologic states an equal number are benefited as with surgery but the homœopathic prescriber has been charged with delay in advising operation when this is not always true, for at least 50 per cent. of my recommendations for surgery have been refused by patients. Of the lethal pathologic conditions a greater percentage die on the table or within 48 hours of operation.

The conservative homœopathic physician is doing a service to the profession and to the community which is quite different from what Dr. Northrop's article would lead one to believe.

An article of the kind is misleading to the public, untrue as to the real status of homœopathy, detrimental to our propaganda and will be used by our enemies.

I hope you will pardon this criticism, but it is honest.

W. F. BAKER, M. D.

"THE PASSING OF THE IDEALIST"—A REPLY.

JUST what may have been the motive for the article bearing the above title in the June number of *THE HAHNEMANNIAN MONTHLY* from the pen of my very good friend H. L.

Northrop is past comprehension, especially as he begins his pessimistic wail by honoring the name of the immortal founder of homœopathy. That the theory is an ideal one is indisputable because it is a law of nature that can never fail where success is possible, that can never cease to exist though sometimes obscured by a cloud of ignorance and disbelief. That homœopathy is not taught in our schools and not adhered to by many practitioners is the result of indifference, and, in some instances, laziness, so why decry the theory? There are, however, more followers of Hahnemann than Dr. Northrop imagines and they are solely so because they have faithfully tried and succeeded in the practices of those masters of our school whom too many publicly honor but privately ridicule.

In the first place let us ask what an idealist is. Webster defines it as "One whose conduct is influenced more by ideals than by practical considerations, hence a visionary; a dreamer." Does Dr. Northrop mean to insinuate that those great men of the past who adhered strictly to the tenets of our faith were "dreamers?" Rather let us acclaim them thoroughly practical because having put into practice with the greatest success what they knew to be true. The trouble with many of our school is not that they have tried faithfully and found wanting any of the great truths but that they have either distorted the treatment with opposing methods or have never really understood what homœopathy was. If one should overhear someone say that "Mr. A. is honest but that Mr. B is *strictly* honest" what would be the inference? It is just so with one who is an homœopathic practitioner and one who is strictly so. There can be no mixing of other treatments with homœopathy without actual departure from it. If the reader does not believe this let him stop quoting Hahnemann.

Dr. Northrop writes that "The homœopathic profession is a house divided against itself." That is not absolutely true any more than it would be true to say that this country was divided against itself because there are thousands of pro-Germans here. Disloyalty will ever be found in all the associations of life and what is true will yet live though scorned and trampled on boastingly by many. A great writer once said, "The minority is always right," and all the neglects of adherence, all the misunderstandings of practice, all the ridicules of

the faithless will not alter a law of nature which is condemned only because not applied.

It is needless for the writer to tell Dr. Northrop of his admiration for his surgical ability and with equal truth to admit his own personal ignorance of that particular branch. What, therefore, would be Dr. Northrop's opinion of a thoroughly medical man writing on a surgical question? Is this eminent surgeon familiar enough with the *materia medica* to condemn it? Why not encourage a more careful and persistent study of the *materia medica* and repertory (which *can* after all be understood and applied) instead of singing "I can't do that sum" and following after the unreliable and ever-changing theories of the dominant school?

WM. JEFFERSON GUERNSEY, M. D.

THE ETIOLOGY OF CANCER.—To those who are interested in the etiology of cancer some remarks of Ochsner will not pass unheeded. In an article on cancer of the stomach he refers to chronic irritation causing a disturbance of circulation which gives rise to a pathological condition, either directly or by producing a condition which makes it possible for the *true living irritant that caused the formation* of cancer to become successfully active. Also, no matter how thoroughly the soil for the production of cancer may be ready, unless there is a disturbance of the circulation, unless there is a condition present which inhibits the natural protection of the tissues against the development of *the living cause of cancer*, cancer cannot be produced.

He also points out that cancer develops apparently by preference in an *acid* medium, namely, on the proximal side of the pyloric sphincter, and on the distal side of the sphincter of the ileocecal valve.

In cancer in fish it has been found that fish living in clear water do not develop cancer. Those living in water slightly soiled by cancerous fish, have it in small proportion, and in badly soiled water the proportion is large. The cancer develops on the gills. Does it not seem reasonable that this is because their gills are exposed to an enormous extent to this soiled water?

Why do we have 30 per cent. of our cancers in the stomach? May it not be because the stomach comes in contact with food that is not clean? Why do civilized people have cancer of the stomach more frequently than do Indians? Is it not because civilized people are manure eaters? Why do they have an enormous amount of cancer of the stomach in Japan, and practically no cancer of the stomach in people who live within a few hundred miles away from Japan, who do not fertilize their gardens with night soilage? Is this not because we must have a specific infectious substance aside from local irritation to cause cancer?

It seems to him logical we must continue to search for the living cause of cancer, especially in view of the fact that a specific organism has been demonstrated which causes cancer in plants.—*Surg. Gyn. and Obst.*, vol. xxvi, p. 370.

EDITORIAL

STATE HEALTH INSURANCE.

THE Pennsylvania Health Insurance Commission is now holding its meetings preparatory to making an early report at the next meeting of the State Legislature this coming winter. The investigations from which this report will be formulated with the expectation of some constructive action are being made by sixteen various agencies, mainly sociological in nature. Dr. J. B. McAllister, of Harrisburg, President of the Pennsylvania State Medical Society in 1917, has been appointed by Governor Brumbaugh as the medical member of this Commission.

It has been well established beyond controversy that the individual workman fails to protect himself and his family, through the agencies open to him, from the dire results of illness, personal or family, and from old age, and its consequent poverty. And this holds even at the present time when the vast majority of workingmen are making far better wages than ever before, both as to daily wage and steady employment.

Of course, there are always the poor, and actual cases of suffering were presented at a recent meeting of this Commission held in Philadelphia. Health insurance, however, reaches far beyond the poor—it is aimed to cover all workingmen, it has no limitations except those put upon it by legislation—it aims to insure medical care and financial support during illness to vast numbers of laborers. It is impossible to controvert the facts—that illness is the largest single factor of dependency in from two-thirds to three-quarters of the cases.

In an editorial in *THE HAHNEMANNIAN* in September, 1917, the writer called attention to Health Insurance, and the warnings of that article are now justified by the proposed legislation. This seems an opportune time for the sociological and political bodies who favor such legislation to exploit it, and they are getting the labor unions in line. The shortage of physicians, due to the absence of such large numbers of doctors in military service, and the added work put on those left at

home, causes apparent and perhaps real neglect of charity work, and is being used as a cogent argument. Another argument used is that the United States Government has recognized the principle of health insurance by providing for its soldiers and sailors the most liberal system of disability insurance and family allowances ever given by any nation.

After this Committee has reported to the Legislature the results of its investigations with recommendations, it is certain that some bill will be drafted and presented to the Legislature. Two years ago such an act was presented but was too far down on the calendar for action. There is but little doubt that a bill this year will have wide publicity and some action, and it is believed by careful observers that it will be passed this coming session. Such an act should be for the best interests of the citizens as a *whole*, not as a *class*, and to get at the root of the matter requires the views of all interested. The medical profession is vitally interested. What shall be our attitude? It certainly should be one of more than a passive interest. The Workmen's Compensation law, upheld as a model, is not fair to medical men in some of its clauses. It seems unwise to fight against health insurance, for such action on our part will surely prevent our influence in the wording and action of such a law when finally passed, but rather should we watch carefully the wording of the proposed legislation to prevent injustice to the medical profession.

There is a health insurance law in England, and it amounts actually to contract medicine, and was extremely harmful to the general practitioners before they were all swept into military service.

Where shall the expense of such a measure be borne? By a moderate weekly payment by each workman, or by the State, or by the employers as in the workmen's compensation law? Shall the medical services under such a law be fairly remunerated, or not? Shall it be contract service entirely, or by county officers, and shall such appointments be in the hands of labor unions or political bodies, or shall our State and local societies have a voice in this? These are mooted questions. There is much danger, in its possible workings, that contract medicine may interfere tremendously and harmfully with private practice. Dr. McAllister can not alone guard medical interests in this proposed legislation. Write to him your opinions, and if you have any facts or data that may seem of even minor im-

portance in reference to charity work in your city or community be sure to send them to him. The Legislative Committees of all State Medical Societies will attend the meetings of the Commission whenever possible, and watch developments, with the hope of controlling and guiding medical interests; but the individual support and effort of each doctor in the State must be given.

Just because we are busily engaged in war, and the medical profession is so actively interested at present in the enrollment or possible draft of medical men, is no reason for lack of interest in current affairs, and we owe also to those doctors away in military service the protection of their interests at home, so that when they return there shall be work for them to do, patients to treat in private civilian practice, and they shall not be pushed aside by contract medicine in getting back their personal practices, so nobly and willingly sacrificed for their country's need.

The writer wishes it to be distinctly understood that he favors health insurance for labor in a limited form, but fears its influence on private medical practice, unless carefully guarded. There is a very high standard of medical education in the United States of which Pennsylvania is proud to stand as the leader. This will surely be jeopardized if the possible earnings of the private physician are decreased by contract medicine, as students will not be attracted to the study of medicine.

W. M. H.

ATTENDANCE AT THE COMING STATE SOCIETY MEETING.

At no time within the history of our organization has there been such a clearly defined necessity as now exists for a widening and strengthening of that sort of co-operative spirit which, after all, was one of the big motives in bringing the State Society into existence. How better could the profession, and especially homœopathy, rise to the requirements which an abnormal, an unprecedented situation, has brought before it?

Strong, competent, experienced medical men are as necessary to the winning of war as are munition workers. The truth of this is so well known that it hardly requires re-statement. The response of the medical profession to this phase

of the nation's war needs has been more than commensurate with that consecration to self-sacrifice which is one of the first precepts of our code of ethics.

But efficiency—the highest attainable efficiency—is the call of the hour. The maximum preservation of American lives demands it, and especially does it demand it of the physicians and the surgeons.

If war has its recompense, perhaps from a medical viewpoint no small part of it lies in the fact that when those of our brave fighters who escape death, wounds and illness return to us again, they will be physically better and stronger men—the forebears of a regenerated race—for their hardening experiences, their terrible ordeals and the terrific tests they have undergone.

But with thousands of our best physicians and surgeons now “over there,” or preparing to go, the requirement for efficiency at home is such that it only can be fully met by mutually increased effort and unstinted co-operation. No better medium for the exchange of knowledge and views exists for the homœopath than the State Society. Every homœopathic physician and surgeon should be a member of it, and an active participant in all its work and effort toward advancement.

R. B.

TREATMENT OF WOUNDS BY A SOLUTION OF SOAP IN THE CASUALTY CLEARING STATION: Dixon and Bates.—The dressing has been used in 368 cases. During the same period similar cases have been treated with other antiseptics, including ensol, hydrogen peroxide and bipp, with the result that more soap is being used and less of the other antiseptics. A sample of common yellow soap was analyzed and found to contain: Water, 24.6; fatty acids, 63.0; combined alkali, 4.6; fat alkali, 0; impurities 7.8 per cent. This was considered suitable, and it was found possible to make a two and a half per cent. solution of it. The points claimed for the soap solution dressings are that they cleanse wounds quickly, the dressings are much less painful than ordinary ones, there is a saving of labor as the dressings need only be changed every three or four hours, and the solution is easily procured, easily made, and cheap.—*Abstract. Internat. Obstr. Surg.*, p. 267; *Surg. Gyn. and Obs.*, Mar., 1918.

GLEANINGS

SURGICAL ASPECTS OF MALE STERILITY.—In the *New York Medical Journal* of May 26, 1917, Wolbarst reaches these conclusions:

1. The treatment of sterility in marriage requires the most careful study of the generative organs in both parties, preferably simultaneously.
2. A woman should never be subjected to surgical measures for sterility unless her husband has been carefully examined and found capable of fertilization by the systematic efficiency test.
3. In the male spermatric efficiency, judged by the presence or absence of azoospermia, oligospermia, and necrospermia, must be determined.
4. To give trustworthy results, spermatozoa must be examined immediately after emission in contact with the natural female secretions.
5. In a study of eighty-seven cases, fifty per cent were due to azoöspermia, thirty-five per cent to oligonecrospermia, and 13.5 per cent to oligospermia.
6. Bilateral epididymitis caused azoospermia in seventy-two per cent of cases; prostatitis, vesiculitis, and colliculitis caused oligospermia and necrospermia in seventy-two per cent of cases.
7. Sexual exhaustion (excessive coitus) is a frequent indirect cause of sterility.
8. Gonorrhea is the underlying factor in sixty-seven per cent of azoöspermia; forty-two per cent of oligospermia; fifty-five per cent of oligonecrospermia. Sixty per cent of the total number were due to gonorrheal infection.
9. Syphilis appears to be a slight factor in male sterility.
10. Lesions responsible for the sterility were discovered through the posterior urethroscope in forty-seven per cent of cases.
11. Treatment is surgical and must be applied either to removing the obstruction to the passage of the spermatozoa or to removing the pathological genital secretions which injure or destroy them.
12. Artificial impregnation is indicated in cases of subnormal spermatric efficiency, and is often successful.
13. The probability of cure, excepting in azoöspermia, is about thirty-three per cent. In azoöspermia much less.

THE EFFECT OF RANK ON THE DUTIES AND RESPONSIBILITIES OF THE MEDICAL OFFICER.—The importance of the medical officer in the armies engaged in war, as indicated by the rank and authority given him, is less highly esteemed in this country than in any other, including both our allies and our enemies. Medicine has accomplished great triumphs in the armies of Europe. Under unprecedentedly difficult conditions, sanitation has been so ably maintained that both morbidity and mortality from the infectious diseases are less today in the military than in the civilian population of the warring nations. In the British Army, 80 per

cent. of the wounded have been returned to duty. The number of hospitals in France reaches into the hundreds, and for the most part their equipment is excellent. Scientific laboratories are carrying on practical research investigations. Chemists are finding antidotes for the multitudinous poisonous gases turned on by the Germans, and are discovering new compounds to be used offensively. Within twenty-four hours after the first discharge of chlorin by the Germans, not only had the nature of the gas been determined and an antidote found, but protective masks were being made; and within ten days the Germans were being treated with the more deadly phosgen. Indeed, scientific studies made at the front saved the armies of Great Britain and France from complete annihilation. Rehabilitation hospitals in which the badly injured are supplied with artificial limbs and other devices are working successfully and converting the apparently hopelessly maimed into productive, self-supporting citizens. In fact, these institutions constitute one of the great triumphs of military and conservative medicine. Every wounded and sick soldier can be instantly located and his condition reported to his friends. In this way the discontent arising from anxious waiting for news is avoided. There has been no breakdown in the medical service in the great armies of Europe, as has been the case so often in the past and with us in 1898. When a son is killed in battle, parents seek and find consolation in the proud knowledge that he has died fighting for his home and his country; but when he is wounded or sick and dies from neglect, there is no consolation, and in the most patriotic soul a bitterness against those in authority develops.

All this and much more might be said concerning the efficiency of the medical service of our chief allies. What is the explanation of its efficiency? The answer is that the medical officer is given support backed by rank and authority. A line officer in the British Army hesitates a long while before he rejects the advice of his medical colleague, because that colleague has rank and authority commensurate in some degree at least with his own, and is recognized as his superior in the special line of work. Compare this with the record of the congressional inquiry into the conduct of the War Department in the war with Spain, when, according to his own testimony, the commanding officer at Chickamauga in 1898 ostentatiously drank from a well condemned by his medical officer, while his hospitals were filled with typhoid fever patients. We have gone into this war with the medical officer invested with no more authority than he had in 1898. Is it unreasonable to ask if we are to repeat the experiences of that time? However, we are told that the line officer of today is much wiser than his predecessor of twenty years ago, and since he makes this statement himself, we must give it credence. We certainly hope that it is true. It is the duty of the medical profession to protest against this condition. The medical men of this country are not slackers, as is shown by the fact that more than one-seventh of their total number have voluntarily offered their services to their country, notwithstanding the failure of those in authority to give the reasonable recognition asked. We have asked for increased authority, and in the army this can be secured only by high rank, because when a medical man goes into the service the Government puts its stamp on him just as it

does on the coin of the realm; and 30 cents will not buy a dollar's worth of anything. So far the protest has fallen on deaf ears.

Medical men will play the game and do their duty, whatever may be the verdict in this matter; but it should be clearly understood that they are going into the game under a heavy handicap. They will do the best they can; but if discontent should arise from poor or poorly prepared rations, if respiratory diseases prevail as the result of overcrowding, if pneumonia becomes widespread because barracks are not heated and soldiers are not warmly clothed and amply provided with blankets—if all these things happen, the medical officer will continue to do the best he can under the conditions, but he will not be responsible for the conditions.—*Editorial, Journal American Medical Association.*

INFLUENCE OF THE SEX GLANDS ON DEVELOPMENT.—The influence exerted by the genital glands on the other parts of the reproductive apparatus, and on the body generally, is a remarkable illustration of the chemical correlations that may exist in the organism. That the lack of the sex glands—a situation which arises as the result of castration—may bring about conspicuous alterations in physique and modifications of the expected development is a fact long familiar. When the removal of testes or ovaries is carried out early enough, that is, before the period of puberty, the development of the so-called secondary sexual characters is interfered with. We must regard the germ cells, says Starling, not only as representing the cells from which the individuals of the new generation may be developed, but also as concerned in the formation of chemical substances which, discharged into their hosts, affect many or all of the functions of the latter, with the object of finally subordinating the activities of the individual to the preservation and perpetuation of the species.

Even more striking than the long observed failure of development in the absence of suitable hormones furnished by the sex glands, a result that is essentially negative in character, are the positive alterations in bodily evolution that result from the introduction of female factors into the developing male, and vice versa. By means of transplantation experiments, in particular, it has been possible to show that the sexual glands direct an influence on sex characters through something resembling an internal secretion. Remarkable instances have been afforded by Steinach in particular. For example, he transplanted to castrated young male rats and guinea-pigs the ovaries of their sisters; the males became in weight, size, and in all proportions of their body like females. The mammary glands were highly developed and even secreted milk, whereas the growth of the penis was obviously inhibited. On the other hand, young castrated female guinea-pigs increased in weight and size after implantation of testes, and became in all the proportions of their body like males. The castrated male is feminized by the ovary, the castrated female is masculated by the testis. Besides, the feminization and the masculation in the experiments of Steinach were also manifested in the transformation of the sexual behavior of the experimental animals.

It is apparent from this and other evidence which might be cited that the hormone of the sex glands acts in a sex-specific character, as

Lipschutz has recently termed it; that is, the male gonad furthers the development only of male sex characters and inhibits the development of female sex characters, whereas the female gonad furthers the development of female sex characters and inhibits the development of male sex characters.

Steinach has gone a step farther in recent years in suggesting that the organism is non-sexual until it has reached a definite stage in embryonic development. The sexual transformation of the body is believed by him not to begin until the puberty gland has become differentiated into male or female. In support of this view, Lipschutz cites the observations that a castrated hen assumes the plumage and the spurs of a cock, whereas it is well known that the castrated cock keeps his plumage and spurs. From these facts, he adds, we must conclude that the development of the male plumage and the spurs does not depend on stimulation by the male sexual gland, whereas the female sexual gland transforms a male-kite plumage into a female one and inhibits the growth of the spurs. The male plumage and spurs become male sex characters, according to Lipschutz's interpretation, not because they result from an action of the male sexual gland on the non-sexual soma, but because the development of these non-sexual characters is influenced in the female by the internal secretion of the female sexual gland. The hormones of the sex gland may thus further or inhibit the natural continuance of conditions foreshadowed in the embryonic form.—*Journal American Medical Association.*

ALCOHOL AND STERILITY.—Sterility in the male is frequently charged to genital diseases. Although the habitual use of alcohol in excessive amounts has long been held responsible for alterations in the reproductive functions, it is usually to cirrhosis or fatty infiltration of the liver and to sclerotic conditions that attention is popularly directed in illustration of the baneful effects of alcoholism. It is being realized, however, that alcohol alone probably does not suffice to produce cirrhosis of the liver. This drug is only one of a number of contributory factors. It is difficult, if not impossible, to produce cirrhosis experimentally in animals by the ingestion of alcohol. But there is increasing evidence of the harm that alcohol can do to the generative organs. Stockard's now widely quoted experiments demonstrate that the germ cells of males can be so injured by allowing subjects to inhale the fumes of alcohol that they give rise to defective offspring, although mated with vigorous untreated females. The offspring of those so treated when reaching maturity are usually nervous and slightly undersized. These effects are apparently conveyed through the descendants for at least three generations. Such evidence establishes at least the probability of the transmission of serious ill effects to human offspring through alcoholic indulgence of the male parent. Stockard has stated that guinea-pigs given alcohol by inhalation over a period of more than a year and a half were still good breeders, and when killed showed no signs of changes in the testicles. This is somewhat contrary to what many necropsy reports on habitual drinkers leads one to expect. It has been stated on presumably good statistical evidence from histologic study that chronic alcoholism constantly

causes retrogressive changes in the testicles independent of senility or chronic diseases, even to the point of complete loss of the seminal epithelium. Weichselbaum and Kyrle further maintain that the most marked changes occur in the testicles in alcoholism with cirrhosis. Lately Arlitt and Wells, of the Sprague Memorial Institute, Chicago, have furnished conclusive experimental evidence of the almost inevitable marked degenerative alterations in the testicles of animals to which alcohol is daily administered. They state that the changes affect the steps of spermatogenesis in inverse order to their occurrence, so that for some time before sterility and complete aspermia result, the animal is producing spermatozoa with all possible degrees of abnormality and deficiency. The possible relation of this abnormal spermatogenesis, as Arlitt and Wells state, to the production of defective offspring is obvious. No other tissue was found to be noticeably affected by the alcohol. The experimental observations of the Chicago pathologists thus harmonize with the necropsy findings in human alcoholics.—*Journal American Medical Association*.

THE "TACHYCARDIACS."—Gallavardin reproduces with comment most of the report recently published by the British Medical Research Committee on the soldiers returned as cases of "disordered action of the heart" or "valvular disease." In 150 cases in his own experience, the condition was serious in only two, the pulse from 110 to 150 and the blood pressure 170 to 180 mm. mercury; in all the rest no organic cause for the tachycardia could be discovered. In the grave forms the pulse ranged about 100, the pressure 160 mm., but even climbing one flight of stairs sends the pulse up to 170 or 180, and it does not subside to the former figure for five minutes or more. Sedentary service has to be found for the men of this class. Below the moderate cases, in the mild group, the pulse keeps between 60 and 80, occasionally reaching 90, with pressure of 140 or 145 mm. It may run up to 150 but subsides to the former figure in a few seconds after reclining. Men in this group can be set to driving artillery wagons and the like, to spare them from wearing a knapsack and long marching.

Gallavardin comments on the large numbers of these "tachycardiacs" we are encountering when before the war we had scarcely a suspicion of this vast field of non-organic cardiac pathology, this tribe of men with palpitations, shortness of breath, and disordered action of the heart with no organic lesion to be found. He emphasizes that the war did not create this category of "cardiacs;" it merely has revealed them. These "cardiacs" existed just the same before the war, but they never felt the need for consulting a physician on this account, and merely sought light occupations behind counters, etc. The profession at large knew nothing of this army of non-organic tachycardiacs, and the army physicians seem to have paid no heed to these men who were constantly dropping out of long marches and excused from carrying the knapsack. Those that did not drift into sedentary services were discharged from the army labeled endocarditis or hypertrophy of the heart. Consequently the profession during the first year of the war was amazed and skeptical at the wholesale dismissals from the army for endocarditis, tachycardia, etc., when the most skilled auscultation revealed nothing wrong. But they had to yield

to the evidence, and recognize that there is a whole series of physical disabilities in this line—at least partial disability—which is at least as important as that due to organic heart disease. Infectious diseases have a great influence on the development, or rather the aggravation of these tachycardia neuroses, but a constitutional nervous predisposition is plainly evident in most of the cases. The over-excitability of the sympathetic system is not confined to the heart innervation.

He compares his 150 cases with those analyzed by the British committee, saying that time alone will tell the future of these cases. Aside from the graver cases, he does not think there is serious danger for the heart. Their rapid heart beat makes them poor runners, just as their emotional instability and trembling make them poor marksmen. Their dyspnea from exertion is never accompanied by hypertrophy or dilatation of the heart. The probabilities are that this over-excitability of the nervous system will calm down as they grow older. He queries whether this special circulatory excitability may not predispose to vasomotor paralysis in the course of various infectious diseases, and thus be responsible for the fatal outcome. The tachycardia is regularly paired with hypertension, and this may be an element of danger, setting up stable processes of hypertension. Still further peril lies in the possibility of actual organic disease developing in a heart overworked by this tachycardia. He adds that in 500 young men, all free from organic valvular disease and tuberculosis, the pulse rate during the revision examination was from 50 to 75 in 2.6 per cent.; from 75 to 100 in 25.6; 100 to 125 in 36.6; 125 to 150 in 27.2, and from 150 to 175 in 8 per cent. All, of course, were emotionally excited, but the figures illustrate the wide individual variation.—*Journal American Medical Association*.

TUBERCULOSIS FROM THE MILITARY STANDPOINT.—Maragliano remarks that there seems to be a good deal of uncertainty among the army medical officers as to tuberculosis in relation to the military service. He declares that the only question should be, Has the man any kind of a tuberculous affection? If the answer is affirmative, then there is only one thing to do, the man should be eliminated from the army. Even when the man is well nourished, he is liable to have his precarious balance upset at any moment. Hence he cannot be utilized in any way in military service, which is liable to be or become eventually harmful for him. No gradations are possible, he insists. No physician can authorize the retention of a tuberculous man; no one can guarantee that he has sufficient resisting powers to bear the depressing influence of military life either in the active zone or back of the firing line. The State and military authorities demand that no person with tuberculosis detectable by the diagnostic measures at our command shall be admitted to the military service. A circular issued by the minister of war, April 15, 1917, deplores the fact that men have been passed for the service with tuberculous lesions so serious and advanced that ordinary clinical examination should have revealed them. Certain physicians in examining the recruits are misled by their zeal to swell the army ranks, and they pass candidates who, they think, are capable of rendering good service even although they know that the men are tuberculous. But the nation

and the government do not want this at all. Physicians should follow the lines laid down for those who are responsible for the make-up of the army. They should not restrict their search for tuberculosis to pulmonary lesions alone, as is too often done, but should seek for tuberculous affections of all kinds, however slight they may appear. This is a service which physicians can render now to the army. The benefit from it will be felt in the near future by the whole country. [Maragliano speaks with authority as he is not only one of the leading experts on tuberculosis but is also a senator of the realm, in close touch with the government.] He emphasizes that any focus of tubercle bacilli may and does remain circumscribed and occult as long as the resisting forces of the organism are able to oppose to them an adequate defense. But once the resisting powers are weakened by any cause, the bacilli throw down the barriers, and sally forth to conquer. Among the instructive diagnostic findings in case of a pulmonary lesion, he cites elastic fibers in the sputum and detection of antibodies in the blood and of tubercle bacilli in the urine. Latent tuberculosis of the kidneys is much more common than is generally believed. In dubious cases, roentgen examination is imperative and subcutaneous injection of tuberculin, not less than 2 or 3 mg. if there are no broncho-alveolar foci. With an existing focus, 1 mg. or less is enough. The focal reaction should never be overlooked; this may be as marked after taking 1 gm. of potassium iodid at one dose as after the tuberculin test. It should never be forgotten that tuberculosis proceeds in stages, now advancing, now stopping, as the defences grow stronger. The "clinical cure" means merely that the defence is stronger than the invading host and is holding it in check. If physicians at large appreciated this, they could surround the tuberculous with precautionary measures so that many of them could live on indefinitely. They should never be exposed to the vicissitudes of army life.—*Journal American Medical Association*.

GOITER: TREATMENT AND PROPHYLAXIS.—At the Swiss Surgical Association, March 10, 1917, Kocher discussed the history of operative treatment of ordinary goiter and means to ward off goiter. He emphasized the importance of the blood picture as an index of whether the thyroid functioning is deficient or in excess. With hypothyreosis the enlarged thyroid should be reduced in size only what is absolutely necessary to relieve mechanical disturbances, leaving as much of the functioning gland tissue as possible. The arteries should not be ligated if it can be possibly avoided, as this is liable to devitalize the tissues nourished by them. On the other hand, with hyperthyreosis, the operation should remove enough of the gland, but never the whole, and the functioning should be checked by ligating the main arteries, with or without excision. Kocher advocated enucleation of the diseased tissue while retaining the sound tissue. This guarantees better against recurrence, he said, than Mikulicz's wedge excision and the Porta-Socin method of enucleation. With vascular or exophthalmic goiter more than two arteries (3 or $3\frac{1}{2}$) must be ligated to ensure hemostasis. All four or five arteries should not be ligated except at two sittings. What he called the primary subperithyreal ligation

of the arteries, especially the inferior, seems to be the simplest and safest technic when the perithyrium is free.

The mortality of goiter operations has been brought down in fifty years from 30 per cent. to 3 per thousand and further progress can be only in the line of prevention. For this he advocated modifying the drinking water by addition of a minute amount of iodine. In the endemic foci the children first show signs of goiter after a few months in school; the confinement in school predisposes them to feel the effects of the unknown substance that causes goiter. On the other hand, army service is liable to cause the retrogression of established goiter. Guttinger reported that in one group of 417 young recruits—all just 20—331 showed goiter at the beginning of their military service, but no signs of goiter could be discovered in 146 of them at the close of their service. Of seventy-six visible goiters all had retrogressed except 21 per cent., and of 138 goiters evident on palpation, only 58 per cent. could still be felt by the end of their term of service. These facts confirm the importance of hygiene and outdoor life in warding off goiter. Kocher cited experiences which demonstrate the favorable action of iodine in the earliest phases of endemic goiter. Also the experiences with fishes which developed goiter in certain ponds and the goiters retrogressed when a minimal amount of iodine was added to the water. He therefore suggested that in endemic foci of goiter the younger school children should be encouraged to drink freely of water prepared with a minute amount of iodine. This in connection with good ventilation, clothing that does not bind anywhere, regular bowel movements, and plenty of exercise in fresh air will tend to ward off the development of goiter. That good drinking water not only prevents goiter but aids in the retrogression of old goiters, was proved by his experience with Lauterbrunnen water supplied to 75,000 school children in the Bern district. He urged that this water should be barreled for the school children.—*Journal American Medical Association.*

HEART DISEASE ON THE FIRING LINE.—Aubertin states that during the three years of the war the men with heart disease have been gradually sifted out and sent back to him as chief of a service for heart disease. Many with mild functional disturbances, promptly recuperated and returned to their post at the front. Those with organic trouble have been apportioned to light duty or dismissed from the ranks altogether. In a recent series of "cardiacs" thus received at his service, 9 per cent. were sound and had merely managed to convince the army doctor that something was wrong with their heart. In 12 per cent. the heart symptoms were traceable to incipient tuberculosis, alcoholism, anemia in the young and fatigue in the older men, without actual heart disease. With actual organic trouble he found only two cases of thyroid origin among the thirty-two men with tachycardia and one case of paroxysmal tachycardia. Extrasystolic arrhythmia is generally labeled myocarditis, although his examination always failed to disclose anything abnormal in the functioning of the heart. This type of arrhythmia, he remarks, frightens the unwarned physician more than it frightens the patient. In short, he declares in conclusion, there still are some men at the front with organic heart

disease, but nearly all have some slight aortic systolic murmur which escapes detection except at times of unusual physical stress, at which time attacks of tachycardia develop. The soldiers with valvular disease have nearly all been sifted out by this time.—*Journal American Medical Association*.

BANANA AS FOOD.—Numerous digestion experiments were performed by Pease and Rose to determine the food value of the banana. The results of their experiments show that the banana is a useful fruit that can with profit enter liberally into the child's dietary provided it is fully ripe or well cooked. If eaten baked in the yellow stage of ripeness or if eaten raw when fully ripe, the banana makes a delightful and highly nutritious article of food. Its composition does not warrant the use of the banana as the main component of the child's dietary, but it can compete well with other fruits and is decidedly to be preferred to candies. The nutritional value is relatively high, approximately one calorie per gram of pulp; and its carbohydrates, when it is fully ripe or cooked, are not less assimilable than those of cereals and potatoes. In the raw food the digestibility is directly proportional to the ripeness of the fruit. There is no positive evidence that the banana influenced bowel movements. In the many tests there was no suggestion whatever of any deleterious effect from consuming large amounts of fully ripe bananas. Prolonged use of the underripe fruit, on the other hand, developed undesirable symptoms. The banana ought not to be eaten raw until after the brown spots begin to appear. The brown color of the peel, however, should not be confused with the darkening due to bruises. An injured banana is soon invaded by molds and yeast cells. The banana properly handled and allowed to ripen is a wholesome food, uncontaminated by dirt and pathogenic germs even if purchased from the push cart in the congested streets.—*Journal American Medical Association*.

DIFFERENTIATION OF TRUE FROM FACTITIOUS PAINFUL AFFECTIONS.—Haslebach comments on the common neglect of digital palpation in cases of alleged muscular, nervous and traumatic lesions. Palpation is usually most instructive in the very cases in which other methods of exploration have the least to show. We should never neglect an opportunity to exercise and perfect the "eyes in our fingertips." When a war wound or other injury does not heal in the usual time with restored function, some complication is responsible, irritation of nerves, development of adhesions, spastic hypertony, stagnation of blood in certain veins, or exudates or deposits in joints. Whenever a nerve is suffering at any point in its course from any of the above troubles, the circulation in the nerve is interfered with, and there may be pain, anesthesia or other symptoms at or near or remote from this point, which is always more or less tender. He seeks the tender point by making spiral movements with pressure around the suspected point. When it is reached, the finger feels a slight contraction and the patient makes an uncontrollable expression of pain and the parts under the fingers may stiffen. As every one of these nerve points has its own symptoms, so every symptom can be followed to its nerve-point source. The most commonly involved nerve points are

in the orbit, temple, mastoid process, in the neck at the trachea or thyroid, in the interspaces, the ileosacral region, the pelvis, the inside of the thigh, the knee and the malleoli. Anemia, gout, rheumatism and arteriosclerosis are the principal causal factors, aside from trauma, and discovery of these tender points confirms the reality of the disturbances complained of. This is the main field for physiotherapy, especially massage and heat. In chronic cases, a severe aggravation of the symptoms follows after a few days, usually in the second week. This aggravation is almost infallible testimony to the reality of the trouble. If it does not occur after energetic treatment for ten or fourteen days, we have good reason to suspect the truth of the patient's complaints, unless he is so debilitated that the organism cannot be aroused to fight the disease.—*Journal American Medical Association.*

TREATMENT OF GONORRHEA.—Renault mentions a number of minor points useful to bear in mind in treating acute gonorrhea. Among them is the necessity for a nourishing diet, to keep up the strength, but avoiding acids as they render the urine more irritating. He specifies oranges, lemons and salads, on account of the vinegar, as better avoided, and particularly asparagus during its season. Copaiba and santal reduce the secretion but at the expense of increasing the inflammation in the urethra. They are not indicated until the end of the second or third week. Then, if the stomach can stand them and they are kept up for four or five weeks, the secretion dries up completely in most cases without local measures. Acute gonorrhea is rebellious only in those with sluggish metabolism. These require three or four permanganate flushings. But they must be given by a physician or trained attendant. One a day is enough, he thinks. He regards as chronic any case that persists over three months. The only effectual treatment when the microscope shows no further gonococci is with copious irrigation of the urethra and bladder with permanganate or silver nitrate after preliminary dilatation of the urethra, repeating every third day, supplemented with massage of the prostate. If this fails, he orders an iodotannic or tannin bougie every other night. Throughout the entire course of treatment he insists on the patient's drinking water as the only beverage, and for two or three months after complete subsidence of all urethral oozing. Both physician and patient must bear in mind that the hard thing is not to suppress the oozing, but to keep it suppressed. The least imprudence will bring it back again.—*Journal American Medical Association.*

WAR WOUNDS OF THE EYES.—Terrien remarks in the course of his review of ophthalmology in 1917 that the visual disturbances of shell shock are generally transient, but that photophobia, spasmodic myopia, amblyopia or restriction of the visual field may be quite durable. Some think they are of hysteric nature. Vaccination against typhoid may bring on a relapse of iridocyclitis. As the uveal tract is so vascular, it is easy to understand how the vaccination may induce the localization there of casual infection, analogous to the oculoreaction to tuberculin. He has encountered one case of grave purulent iridocyclitis after the vaccination. Sometimes the vaccination started up metastatic ophthalmia, herpes

of the cornea or infectious trigeminal neuritis, in those already bearing the seeds of such. Glaucoma secondary to iridocyclitis may rupture under the influence of the reaction to the vaccination. A reaction on the part of the meninges might entail lesions of the optic nerve and tract or ocular paralysis. Morax has warned that a primary acute glaucoma might rupture under the reaction to the vaccine, but he knows of no scientific reason why chronic glaucoma should be aggravated by it. To admit a causal connection, the aggravation must have occurred at the time of or soon after a reaction violent enough to modify the temperature. Ophthalmoscopic and medical examination should precede the vaccination, and he advises exclusion of all with syphilis, tuberculosis, or joint troubles when there is a history of lesions of the uveal tract, especially in persons over 35 or 40. The strict asepsis and antisepsis with war wounds have rendered sympathetic ophthalmia of less frequent occurrence than was anticipated, but a few cases have been encountered. Possibly they might have been more numerous if the patients had been kept under observation longer. A sympathetic reaction is comparatively common, appearing early and disappearing after enucleation. The poisonous drift gases may induce iritis or neuroretinitis, but the course has proved essentially mild.—*Journal American Medical Association.*

WASSERMANN AND SPINAL FLUID TESTS.—This paper comprises the study of 203 cases; 43 paresis, 34 tabes, 27 cerebro-spinal syphilis, 4 congenital syphilis, 11 meningitis, 3 tetanus, and 81 other non-syphilitic organic and functional conditions. The characteristic paretic curve of the colloidal gold reaction was found in 42 cases out of 43 spinal fluids examined. Four cases gave a negative Wassermann in the blood; all showed a marked positive globulin test; all but 5 had a lymphocytosis of over ten cells per cubic millimeter. Of the three atypical reactions, 1 occurred in a very early case, 1 was probably due to an old and infected spinal fluid, and 1 was made after vigorous intraspinal therapy.

In the miscellaneous group (76 cases) all findings were practically normal. The Wassermann in the spinal fluid in all cases was negative. One blood gave a positive Wassermann, the cell count was normal except in 2 cases of meningismus, in 1 brain tumor and in 1 spinal cord tumor: the globulin test was negative in all but 1. The colloidal gold test showed nothing definite except occasionally a slight decolorization in the lower dilutions. In 3 cases of multiple sclerosis all findings were negative, but in 1 case the colloidal gold test showed a typical paretic curve with a negative Wassermann test.

The effects of antisyphilitic treatment on these tests have been variable. In the main the syphilitic cases have been treated with salvarsan, intravenously and intraspinally (Swift and Ellis method), combined with mercury. In all cases there has been a gradual reduction of the cell count to normal. In the majority of cases the globulin test has become normal while in some it remained slightly positive. In 21 cases of paresis, treated thoroughly, all but 2 gave a negative blood Wassermann. In the spinal fluid it persisted positive in every case. Out of 22 cases of tabes treated, 16, or 73 per cent., gave a negative Wassermann both in the blood and spinal fluid. In only five instances of all antisyphilitic cases treated did the

author notice any change in the colloidal gold curve, and in only 1 case did the curve become normal. Hammes concludes that no spinal fluid test (except the presence of bacteria) is specific. Every test is simply that much co-operative evidence and should be combined with the history of the case and the clinical findings.—*Journal American Medical Association*.

TONSILLOSOCOPY.—French, in the *New York Medical Journal*, declares that the assistance derived from the use of the tonsilloscope have, during the year of its existence, been very great. Indecision has practically given way to certainty. Except with the borderline class, about which it may not be possible to decide at once, one may always quickly determine whether tonsil contains pathological and therefore possibly actively pathogenic material, or is free from it. It has been our experience with parents entertaining positive views in opposition to tonsil removal that when, by virtue of the disclosures of the tonsilloscope, they were authoritatively assured that the tonsils of their children contained material which was probably giving rise to systemic disorders, or in which a foundation for future ill health was almost certainly laid, they were either thrown into a position of defense from which it was not possible logically to extricate themselves, or yielded at once to the tonsilloscopic evidence and asked in justice to the future health and proper development of their offspring for radical and immediate action. Diseased tonsils in a child are so great a menace to his future health that they should always be enucleated, for it is not necessary at that stage of life to seek to establish a relationship between possible active foci and systemic diseases. In an adult the conditions are somewhat different, and while, of course, it would be ideal to remove every tonsil which showed definite disease, because its presence is a potential source of mischief to the host, we find that for the most part it is necessary to demonstrate to the patient its etiological relationship to some existing systemic disorder before there is hope of the radical operation being even taken under consideration. The problem of how to determine such a relationship in youth and adult life has become a real one, and happily it has been partly solved. A tonsilloscopic demonstration of the presence of pus in the tonsils of an adult not infrequently results in a request from the patient for their eradication, despite the fact that neither definite nor constant symptoms are apparently occasioned by it. The rule is, however, that adults will not request the removal of diseased tonsils even when they are of an advanced type, and it is, therefore, the physician's responsibility to determine whether such removal would be of advantage to the patient and would not be likely to be attended with serious risk. If pus is found in a tonsil, we do not believe that there will be hesitation, even on the part of the most conservative counselors, to agree upon the advisability of the removal of the glands, and the presence of pus can always be detected with the tonsilloscope. As a result of our observations, we regard it as a perfectly safe statement that the enucleation of extensively diseased tonsils, whether giving rise to systemic disorders or not, will in some way surely prove to be beneficial to the health of the host. Even

granting that this proposition is entirely correct, we must of necessity weigh the advantages with the disadvantages and in some cases perhaps leave the final decision to the patient. After all proper safeguards have been thrown about the patient we have no hesitation in advising tonsil enucleation in reasonably healthy adults under age of 40 years, but as the conditions may be and usually are materially different between that and old age we approach the consideration of tonsillectomy in such individuals in a very different attitude of mind. Each case should be studied from every angle before a decision is reached that the radical procedure holds out the only hope of permanent relief of symptoms and that the patient in all ways is in a satisfactory condition for such operation.

The question has often been asked in the past few months: "Of what avail is it to be able to determine that the tonsils are definitely diseased unless it also can be determined whether they contain foci which are active, and therefore giving rise to some systemic infection?" We, of course, through the gynecologist, urologist, surgeon and roentgenologist, may seek to learn of the possible existence of other foci in the body, and thus perhaps reach a decision by exclusion. But there is a way, quite aside from a search through other structures, of determining in a very short time whether an etiological relationship exists between diseased tonsils and systemic disorders the most pronounced symptom of which is pain, and in a somewhat longer time their definite relationship to painless chronic disorders. This consists in removing a considerable quantity of the necrotic tissue in the tonsils by curettage, followed by injections of 50 per cent. alcohol into the cavities from which the necrotic tissue has been removed.—*Med. Brief.*

SPECIAL DISORDERS OF THE HEART FROM GOITER.—Sloan in *Illinois Medical Journal* (March, 1918), writes it is sometimes difficult to differentiate between *heart-block* and *premature contractions*, due to the development of new points of impulse excitation. When at regular intervals a beat is dropped or the pause between beats is lengthened, it is due to heart-block or failure in the transmission of the impulses to the ventricle or to a premature contraction. By listening at the apex you can hear the premature contraction of the ventricle during the lengthened intervals between the pulse beat, while if it is heart-block, the heart remains silent through the interval. *Premature contractions* are more common, especially in the young.

If the pulse beats are coupled and the pause between is of regular length, either every third impulse fails to reach the ventricle or else every third regular impulse from the auricle reaches the ventricle while it is in contraction from a premature or extra contraction, in which case the impulse from the premature contraction does not reach the wrist and every third regular pulse beat is lost. When the ventricle beats at twice the pulse rate, it is due to premature contraction, disturbing every second regular contraction. When the ventricular and pulse rate is halved paroxysmally, it is always the result of heart-block.

When auricular flutter is present, a general anesthetic is extremely dangerous, especially for goiter operation. Unrecognized cases of auricular flutter account for a large number of sudden deaths during an operation

or very shortly afterwards. Patients with auricular fibrillation usually stand anesthesia and shock of all kinds much better than one expects them to. Patients frequently complain of fluttering sensation over the chest and neck for months before flutter or fibrillation is recognized.

INTRASPINAL TREATMENT OF SYPHILIS OF THE NERVOUS SYSTEM.—Sanz regards the use of mercurialized or salvarsanized autoserum or spinal fluid as rich in promise in treatment of tabes, general paralysis and cerebrospinal syphilis, but he warns that with the two latter affections the course is liable to have sudden ups and downs which might prove disastrous if a serious exacerbation happened to coincide with the application of this treatment. He cites from his own experience a case of general paralysis of hitherto mild course in a young woman with no other appreciable organic lesion. He proposed intraspinal treatment but she died the evening beforehand, with symptoms suggesting apoplexy. He regards this treatment as especially promising in tabes. No other treatment in this disease offers any chance of success. He always precedes this intraspinal treatment with a course of mercury and salvarsan intravenously, and he has never had any serious by-effects with tabes although he knows of such in the practice of others who are not so extremely cautious in technic and dosage as he is. In his experience with tabes, the majority of the subjective symptoms disappeared, the incoordination became more or less corrected and the general condition improved. Even the knee jerk returned permanently on both sides after the mercurialized autoserum treatment. The method seems to be undoubtedly effectual, but there is always a local reaction, pains in the lumbar region spreading to the limbs, with a dragging and other disagreeable sensations. Tabetics also shrink from having blood drawn to supply the necessary serum. The cerebrospinal fluid, it is said, does not contain enough albumin to saturate the mercury. He used mercuric chlorid, from 0.5 to 3 mg., for the injection repeating it a month later in the tabes cases, increasing from the smallest to the largest amount mentioned. He always mixed with it some of the cerebrospinal fluid just drawn, the total fluid injected being kept always less than the amount of the total spinal fluid withdrawn. In one case he treated a circumscribed lesion in the lumbar spinal cord by the intraspinal injection, and a violent reaction on the part of the meninges followed with fatal outcome.—*J. A. M. A.*

WAR DEAFNESS AND ITS PREVENTION.—The relative efficiency of various devices for preventing injuries to the ear parts by detonations was tested on guinea-pigs by Guild. Eight preventives have been used in the work done to date: 1. The "Scientific Ear Drum Protector, Tommy," consisting of a hollow soft rubber spherical bulb with an opening on one side surrounded by a flange. 2. A device invented by Dr. George Wilson and Prof. A. A. Michelson, consisting of a hollow frame work of hard rubber in which is supported a valve of light metal so arranged as to stay open and permit ordinary sounds to pass at the edges, but so adjusted that detonation waves can cause it to shut by moving inward and forming contact with what may be called the valve seat. 3. The Elliott "Perfect Ear Protector." 4. The "Mallock-Armstrong Ear Defender." 5. Wax

cones which Guild made after the description given by Rho as having been adopted in the Italian navy. 6. Dry cotton placed firmly. 7. Cotton saturated with glycerin, carefully kneaded to drive out all the air bubbles possible. 8. Cotton saturated with petrolatum, carefully worked in until a uniform mass was obtained. In the first group Guild places the "Tommy" and the Mallock-Armstrong devices. There is nothing simpler to keep clean than "Tommy" and for army use it seems the best of those tested. The wax cone of the Italian navy type comes next in order, followed closely by cotton soaked with petrolatum. Cotton soaked with glycerin did not protect quite so well as that saturated with petrolatum; the explanation probably lies in the greater viscosity of the petrolatum. The Elliott Perfect Ear Protector and the Wilson-Michelson device rank together with dry cotton as having given the least protection to the middle ear parts of the animals used. With all three preventive measures every animal showed positive injuries, and one out of each group of three animals had a ruptured tympanic membrane. Of the mechanical devices, the Elliott reduces ordinary sounds the least and the "Tommy" the most, the "Tommy" cutting it down more than dry cotton does, but all of the mechanical devices permit more to pass than do the wax or the soaked cotton plugs.—*J. A. M. A.*

TYPES OF ARTERIOSCLEROSIS.—Out of seventy-one cases analyzed by Coffen, blood pressure readings and clinical observations having been made in the last three or four years, fifty-two, or 70 per cent., fall according to the "heart-load" in the cardiac group. Fourteen are referred to particularly; five of these have died—three from cardionephritic symptoms, all finally in coma (uremia). One died suddenly with angina pectoris and one in diabetic coma. The majority of the cardiac patients showed on repeated examinations the urinary and clinical findings of chronic interstitial nephritis with increased output, traces of albumin, few hyaline and granular casts. One patient of the cardiac group had been unconscious for two weeks when first seen, in apparent uremia, but recovered on active cardiac stimulation, falling apparently in the cerebral edema type. In the cases falling into the cerebral group (nineteen) there were definite clinical evidences of cerebral hemorrhage in most but there were some anomalies, for repeated blood pressure readings showed in some a high heart-load at times, and some signs of cardiac strain. A considerable number of cases, according to the formula, fell into one or the other group, but so far show no outspoken cardiac or cerebral symptoms. These may later show the prognostic value of estimating the heart-load. Coffen's study shows that the majority of hypertension cases in arteriosclerosis show sooner or later cardiac strain. The estimation of the heart-load seems of value as evidence of increased work demanded of the heart, and to a certain degree of how much work. The kidney's share in arteriosclerosis seems more evident in the terminal stages. Of the patients with arteriosclerosis seen in the past four years, the kidneys function well, as a rule, while the patient is ambulatory.—*J. A. M. A.*

THE PRACTICAL MEDICAL SIDE OF CONTRACT PRACTICE.—The introduction of compulsory social insurance into Switzerland imposes new tasks

on the general practitioner, and Naegeli discusses how he can best meet them and avoid being imposed on. It lies in the hands of the physicians whether the social insurance is to be a blessing or a bane for the common people. There are six great drawbacks to social insurance. Among them is the arousing of greed in the insured, and discontent, the effort to obtain unjustified advantages in the form of unduly long rest from labor and unduly high indemnity and excessive use of drugs and dressings. Besides these three disadvantages, there are the excessive demands made on the physician's time so that quiet, thorough examinations are practically impossible, and the physician feels constantly dissatisfied and is unable to make progress in his scientific attainments, while the patients suffer. The physician's dependence on the insurance company is galling, and takes all the joy out of the actual practice of his profession and may almost completely undermine his self-reliance in medical and other matters. Last but not the least of the drawbacks, is the inability to maintain the personal factor in the treatment of the sick and hence is lost all chance for the important psychic factors.

These drawbacks can be overcome if the physician goes to his task with confidence in his skill, sympathy and strength of character. He must not shrink from protesting against being given more clients than he can handle, and he must make a point of thorough examinations. The insured are not anxious to be cured quickly, so thorough examinations meet with less obstacle than among the non-insured. Another point on which Naegeli insists is that a record should be kept of every case, with findings in heart, lungs and abdomen, whatever the trouble for which treatment is sought. Especial notice and record at the first examination and later should be made of the man's mentality. The urine should also be examined for albumin and sugar, but this can be done by an assistant. The ultimate outcome of each case should be added to the record. These records are especially important from the oversight they permit of the man's psychic behavior during the course of the case. His wishes and longings and the motives for them should be carefully recorded. The anamnesis is particularly important in case of a neurosis. In dubious cases, consultations should be demanded without waiting too long. Arrangements can often be made for this with the medical department of the nearest university.

The main thing, Naegeli reiterates, is the diagnosis, and this includes diagnosis by exclusion of simulation and exaggeration. Detection of these requires not only great medical knowledge and medical confidence but great psychologic talent, as the decision as to the simulation must be based usually merely on the physician's impressions. This is not enough for others, and this alone is enough to justify caution in affirming simulation. In dubious cases it is a wise plan to pass judgment on the man's condition only as it modifies his earning capacity. Although you do not assert that the man is malingering, yet you can report that his earning capacity is reduced very little if at all.

Naegeli warns of the necessity for extreme caution as to simulation in all cases in which there has been concussion of the brain, atheroma, multiple contusions and psychopathic factors. With hysteria, the com-

plaints are constantly varying; the simulator sticks to his one trouble which is "always the same." With hysteria, the man is so convinced of his trouble that he is sure the physician will be convinced too, and he wastes no words trying to convince him, while the simulator keeps affirming the truth of his statements. The latter insists that he cannot be cured and makes no attempt to train himself to increase his earning capacity while the man with hysteria wants to be cured and rejoices at his progress. Mild hysteria and simulation are sometimes associated, and a tendency to a psychosis renders the whole problem more difficult of solution.—*J. A. M. A.*

PATHOLOGIC WANDERLUST.—Helweg says that the morbid impulse to go away, without special motive that others can see for the change, is a common feature of epilepsy, but is not confined to this disease. The French regard this *automatisme ambulaire* as a manifestation of hysteria. In Danish literature Helweg has found records of only four cases, and nowhere has he been able to find records of this morbid tendency in degenerates other than epileptics and the hysteric. He describes six cases in detail in which degenerates displayed at times this morbid wanderlust although conscious of what they were doing. In five of the cases there was a history of a fall on the head and in a number of cases on record there is casual references to trauma of the head. One patient was a young woman of a well-to-do family with some inherited mental taint. She seemed normal as a child but met with two accidents injuring the head and not long after the second one began to wander away from home. Later she left home again and again, living at hotels in the town, pawning her belongings and sometimes stealing to get the money. On some of her wanderings she was accompanied by a man, a chance acquaintance, but there did not seem to be any erotic tendencies, and occasionally she had no clear remembrance of the times she was away from home. Placed in an institution for mental disease, nothing abnormal otherwise could be detected in her.

The psychopathic degeneration responsible in Helweg's cases for the wanderlust is about as common in women as in men, but in women it is not fanned into a flame by abuse of alcohol, and it usually manifests itself in them in other ways than in this tendency to vagabondage. Usually some quarrel or other unpleasantness brings the impulse to run away. In one of the cases the man was in military service and repeatedly ran away to visit his wife. The pathologic wanderlust is practically the same thing whether it is result of epilepsy or hysteria or of dementia praecox or psychopathic degeneration. There is no need to invent special names for it like Donath's "poriomania" and Joffroy's "dromomania."

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

FOUR CASES.—The first is that of a member of the Dutch Parliament who had contracted pneumonia which reached a chronic stage. While undergoing a relapse his expectoration assumed a rusty red color, which disappeared completely in three days on treatment with tuberculin 30th.*

The second case is that of a person who was seized, after an attack of measles, with bronchopneumonia. On the fifth day Dr. Mersch prescribed tuberculin 6th. In a day or two the condition of the chest was completely altered.*

In the third case an old lady was likewise attacked with bronchopneumonia, together with digestive troubles, and was for a long time in a serious state. After the lapse of a single night, which was a rather distressing one, under the action of the remedy the amelioration was great, and it was with difficulty that Dr. Mersch found a touch of bronchitis in the very place where the day before he had heard nothing but the tubular souffle. The prescription ran: Tuberculin 6th, eight packets of ten globules each, one to be taken every two hours.*

Finally, in a fourth case, the patient was a lady of vigorous physique, and twenty-five years of age, who had capillary bronchitis, combined with the symptoms of angina pectoris. Dr. Mersch once more had an opportunity of viewing with astonishment the rapidity with which the therapeutic action of tuberculin may be manifested in such cases.

BACILLINUM.—If we wish to prescribe bacillinum successfully in non-tuberculous affections, we must observe, on auscultation, symptoms analogous to those which are perceptible in tuberculosis. The peculiar characteristics which indicate bacillinum for non-tuberculous maladies of the respiratory organs are, in my opinion, the following: The first is *oppression*; the second, *mucopurulent* expectoration. These two phenomena show themselves always in the last stage of tuberculosis; that is to say, together with the products contained in the preparation of bacillinum. *Dyspnea resulting from bronchial and pulmonary obstruction caused by*

*Frequent repetition is needed in acute cases. The frequency is solely determined by the character of the case at hand.

a superabundant secretion from the mucus membrane is marvellously relieved by bacillinum. I put forward this fact, not on the evidence of a single isolated observation, but on that of several cases conscientiously studied. Such expectoration leads to the auscultation of subcrepitant rales, sounding liquid and gurgling, having some analogy to the moist sounds of tuberculosis.

This power of bacillinum to relieve oppression in pulmonary catarrh is in no way surprising from the point of view of the law of similars, for in the acute and infectious stage of tuberculosis the dyspnea is a characteristic symptom, and is far more distressing than the cough. I have read with pleasure in the work of Dr. Mersch, of Brussels, on tuberculin of a fact which corroborates my statement as to the influence of bacillinum over catarrhal dyspnea. After the sixth dose the patient, who was suffering from bronchial asthma, was seized with violent intercostal pains, with augmented cough; but oppression entirely disappeared after the first day, and did not return even three months after the treatment had ceased.

Two years ago I was called upon to treat an octogenarian who, as the result of a cold, developed an obstruction in the bronchial tubes, and at the basis of the lungs. He passed sleepless nights in a sitting posture, striving to draw deep inspirations. Phosphorus, arsenic and stibium produced no relief. Bacillinum was prescribed and he slept the whole night through.

Last year I was called to the house of an upholsterer. He preferred not going to bed at all to passing the night in bed without closing his eyes. He had humid asthma with incessant cough, which ended by causing him to eject thick yellow and puriform mucus. For eight days he took arsenic and blatta, and for a whole week he passed the nights without sleeping. From the day he took bacillinum he was able to sleep. I saw him again this year in good health. Once or twice he was attacked with the some bronchorrhea and the same treatment was given and the same success achieved. When I am called upon to treat a patient suffering from an obstruction of the bronchial tubes occasioned by mucus, which is frequently thick and opaque and puriform—an obstruction extending to the delicate bronchial ramification, and causing oppression more frequently than cough—I turn my thoughts at once to bacillinum. Bacillinum is a drug for old people, or, at any rate, for those whose lungs are old; for those chronically catarrhal, or whose pulmonary circulation is enfeebled without regard to the age of the subject; for those who have dyspnea, and who cough with difficulty from inaction of the respiratory ducts; for the humid asthmatic, the bronchorrheal, who feel suffocated at night; and, finally, for those who, after taking cold, are straightway attacked with pulmonary congestion. Here, I believe, is the exact sphere of action of bacillinum as a homœopathic remedy.

Bacillinum has been stigmatized as an unstable product. I consider this reproach ill-founded. Bacillinum is no more unstable than psorinum, which is an approved remedy in homœopathy. Typical tuberculous lungs contain practically almost invariable elements. We are no longer permitted to include in the same description the tuberculosis of birds and that of mammals. Although the two bacilli, as far as form

and color are concerned, are absolutely identical, the evolution of the two forms of tuberculosis presents characteristics so different that we are forced to study them separately. It is this characteristic of non-transmissibility from mammals to birds, and vice versa, which forms the chief difference between the two kinds of tuberculosis. Strauss failed in his endeavor to inoculate a fowl with tuberculosis by injecting fifty kilogrammes of tuberculous human sputa, whereas the fowl, absolutely impervious to human tuberculosis, became infected when treated with a very slight quantity of the avian tuberculosis. The guinea-pig, so sensitive to the human microbe, presented encysted abscesses when treated with the virus of birds; it dies of cachexia, but never, as far as the naked eye can discern, of generalized tuberculosis. Rabbits are more sensitive to the avian infection. Dogs are absolutely refractory. The monkey, so delicate in our climate, and which almost invariably perishes from tuberculosis, is uninjured by inoculation from avian virus. The parrot is a remarkable exception to the general rule; it is the only bird which resists avian tuberculosis, while, on the other hand, it is sensitive to that of man.

In contrast with bacillinum I have noted, in my observations on aviare, considerable cough and little dyspnea—an acute inflammatory, extremely irritating cough, such as one meets with in acute diseases or subacute infections in young people; a cough which fatigues, and which leads to enfeeblement and loss of appetite—in a word, a suspicious cough. To conclude my remarks, the utility of aviare in *suspicious bronchitis*—an expression on which I again lay stress—I will recall certain indubitable examples of the cure at the Hospital St. Jacques of bronchitis or of pulmonary congestion at the top of one of the lungs, or of bronchitis on one side only, or of congestion predominating on one side. These localizations on one side are sufficiently grave symptoms to warrant apprehension of the hatching of tuberculosis.

If I myself were attacked, as the result of influenza, or of some weakening malady, with an incessant tickling and stubborn cough, with certain closely localized pulmonary symptoms; if I lost my strength and appetite; if, in a word, I were attacked with bronchitis whose upshot was highly doubtful, and which caused apprehension of tuberculosis, I should not hesitate a single moment, with the examples which I have had before me, to try aviare upon myself.

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PRECAUTIONS IN CATARACT EXTRACTION.

BY

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I AM so firmly of the opinion that the value of any medical or surgical paper is directly dependent upon its being the product of the author's actual experience, that I turn from the subject announced as beyond the scope of a short paper and beg to call your attention briefly to one that seems to need emphasis, especially for those entering the field of intra ocular surgery.

You will, I think, agree with me that there is no operation more brilliant and beneficent than the successful termination of a cataract extraction and on the contrary, no more regrettable occurrence than a disastrous result. We recognize moreover that the dividing line between success and failure is so slender that the slightest mishap may turn the balance for or against its ultimate outcome. Furthermore, there is little we can actually do when error on our part or uncontrollable action on the part of the patient, or infection from any possible cause has ensued. It, therefore, is of the first importance that every case be studied thoroughly and individually prior to operation, and that every precaution and skill be exercised during the operation, that the most judicious and tactful management of the patient may be observed and that the after-treatment be continued with the same scrupulous caution. For the ultimate responsibility of failure inevitably will fall justly or unjustly upon the operator. Careful preliminary examination prior to operation, is quite as essential as the

operation itself and the after-treatment. This examination I would divide as follows:

1. Complete history of the case.
2. Examination of the eye under consideration.
3. Drilling of the patient.
4. Education of the assistant.
5. Discipline of the operating room.
6. Tactful management of patient during operation.
7. Scrupulous care after operation.

The record of the case should embrace the family history as to blindness. The age and previous health of the patient. A record of any former disease or injury to the eye, the present blood pressure, the character of refraction (which may be obtained from former prescriptions or examination of old glasses) the possibility of the eye having been amblyopic or whether it was the better or poorer eye of the two prior to present blindness.

The examination of the cataractous eye should reveal the size and formation of the lid aperture, the amount of prominence or recession of the eye in its socket, the height of the nasal bridge, the condition of the conjunctiva and lachrymal sac, the intra ocular tension, the depth of the anterior chamber, the response of the iris to a mydriatic, the appearance of the anterior capsule, the state of ripeness of the lens and its possible mobility, its size and the probable size of the section required and an accurate test of vision as to light projection. The presence or absence of Iris shadow, shows us the degree of ripeness the lens has attained but the entire anterior capsule should be studied with a well dilated pupil with powerful binoculars and focal illumination. Chalky deposits in the lens and capsule can thus be noted and we may get an idea of the difficulty of the capsulotomy.

Not only the eye but the lachrymal sac must be examined carefully for the presence of discharge. The nose, throat and particularly the teeth should receive careful inspection and correction where needed.

Carious teeth and a foul mouth are undoubtedly causes of auto infection in numerous cases. Should the opposite eye be shrunken, or hopelessly blind from an old injury it would be safer to remove it before operating the cataractous one.

All these conditions should be noted and mentally photo-

graphed on the mind of the operator and any abnormal condition safeguarded by special precaution, or unusual instrument to meet possible emergencies. Indeed I have found it of the greatest service to map out a line of procedure to meet complicated conditions, even though I found it necessary or advisable to change the scheme entirely after starting. Hasty and ill-considered extractions are apt to be fraught with unexpected difficulties.

In a procedure that depends so absolutely for success upon the intelligent co-operation of surgeon and patient, there should be a perfect understanding of what is mutually required. How many of us bear well the removal of an embedded cinder and yet how exacting and how much we unreasonably expect from those perhaps deficient in intelligence, possibly deaf or partially so, who undergo for the first time the exacting requirements of an extensive section of the eye. It is not always expedient, I admit, or practicable, but I believe our patients should receive a preliminary training, having the speculum inserted and removed until familiar with its presence. To look up and down, right and left and to observe silence without argument at the direction of the operator, open the opposite eye with the speculum in place, avoid squeezing of the lids and flinching whenever instillation of drops is made, to breathe through the mouth and remain quiet in case of possible pain and to be assured that they are to experience no pain. A rehearsal or two of this description, teaches prompt and intelligent obedience and gives the patient at least some idea of what will be required.

Therefore, in our general examination of the patient we should take into account their intelligence and temperament. As a general rule less trouble at the time of operation is experienced with well educated persons of equitable dispositions or phlegmatic temperaments than with highly nervous persons, although there is no sure rule as to this.

THE ASSISTANT.

The actual service an assistant can render depends entirely upon his experience and reliability. Far better no assistant than one who has not a comprehensive understanding of every detail and who is alert enough to anticipate the operator's slightest need and careful enough to have the operator's full-

est confidence. If the operator and the assistant have not worked together they should have a complete understanding in matters of technique. As sudden confusion and interruption may disconcert the coolest operator and possibly the patient, at certain critical moments the strictest injunction should be placed on the nurse to forbid entrance to the operating room and to avoid herself creating confusion. These are the precautions which we must observe if we are to have uniformly good results. Poor results in uncomplicated cases are generally traceable to failure to observe them, to undue haste. The rush in and rush out method may do for some forms of surgery but not for intra ocular work. In fact the amount of detailed instruction which might be given would sound absurd and ridiculous but these suggestions, gentlemen, come from actual experience. I had one family doctor suddenly hurrah, in his delight as the lens was being delivered from an extremely nervous old lady, who already had taxed all of my resources and skill in finishing the section and making the capsulotomy. That this unlooked for break did not loose the vitreous seemed more good luck than good management; and yet it would never have occurred to me to have said to him, "Don't cheer when you see the lens come out." I have had a nurse tip over a table and upset a tumbler, and an acquaintance had a nurse set fire to the dressings, by pushing it too near the sterilizer. So thorough understanding and rigid insistence upon quiet are most essential, before the actual operation is started every detail should have been arranged and every person in the room assigned their particular duty and place. And lastly there is the management and support of the patient during the actual operation. Persons vary greatly in behavior under operation, occasionally nervous people from whom we expected trouble, give none, and others who seemed to have good reserve force, for some unaccountable reason go to pieces.

Consequently the tactful handling of the case at the time of the operation, good judgment and a combination of gentleness and firmness are required. Harsh words and shouted directions to an already bewildered nervous and panicky patient only serve to further disconcert him and create uncontrollable action on the part of the patient. I have known some very skillful operators whose weakest point was their inability to preserve their own poise in emergencies. Possibly what is more needed is patience and deliberateness, and it is

often best to attempt no new important step until the patient has regained his composure. For instance, there is no immediate rush to do a capsulotomy after a section or to deliver the lens after a capsulotomy and an interval of fifteen or twenty seconds may be sufficient with a few judicious and reassuring words, to get the patient quiet. Frequently in these super-sensitive cases it is wiser after removal of the speculum to cease all efforts to remove cortical substance, than to risk rupture of the capsule and loss of vitreous. Where a patient from the start is manifestly unaccountable for their behavior, it is wiser to postpone work entirely and resort to general anaesthesia.

Local anaesthesia is always preferable in cataract extraction (except in insane or mentally unaccountable) to general anaesthesia, in the latter the eyes have a tendency to roll upward, the respiratory movement is exaggerated, and there is always the possibility of sudden vomiting and the nausea following ether.

The preparation of the eye itself consists in cocainizing after which the cheek, eyebrows, lids and eyelashes should be scrubbed with a cotton mop, with soap and water, freely flushing the bulbar and palpebral mucus membrane. Only sufficient cocaine should be used to insure complete anaesthesia, as too much tends to soften the epithelium and dull the surface of the cornea, nor should it be used too long before the operative procedure. Good light is absolutely essential and no operative measure should be attempted until the operator is fully satisfied as to this point. Re-dressing must be carried out with the same care, all solutions and eye-droppers should be sterilized and until the wound is healed and the anterior chamber reformed, the boric solution and the cotton compresses which touch the lid should be boiled.

As little instrumentation as possible should be the rule. Clean-cut classical routine, and an operation deftly and dexterously performed is less liable to be followed by iritis or other unfortunate after-results. As rubber gloves interfere with delicacy of the touch required, the hands should be scrubbed for ten minutes with soap and warm water and then examined under high powered binoculars to see that all soil has been removed. The same detail should be observed by the assistant.

The operator's hands should be pliable, any lifting or carrying of a heavy grip should be avoided immediately prior

to operation as they are liable to cramp the fingers or make them stiff and less dexterous. Instruments should be scrupulously clean and boiled in a solution of bicarbonate of soda for ten minutes. All solutions, cocaine especially, should be actually boiled before using, together with the eye-dropper and every instrument should be re-dripped immediately before touching the eye. Undoubtedly we exercise more care than absolutely necessary in many cases but it is wiser to err on the safe side.

These are perhaps in somewhat tedious detail the precautions and methods which have served me best in actual experience, and they are those which I learned in my long training and association with Dr. Charles M. Thomas, than whom no better ophthalmic surgeon ever lived, bar none, and to whom I owe whatever limited skill I may possess.

Freedom from tremor and steadiness of hands if not possessed naturally by the ophthalmic surgeon, should be acquired if possible by long practice in holding the knife at a given point. Steadiness and calm in the face of complications can, of course, only come with experience but long apprenticeship to a master of the art should be the training of any man before he has the moral responsibility at least to perform the most delicate of all operations to the human frame.

THE CONSULTING PHYSICIAN AND THE PHYSICIAN HE CONSULTS.

BY

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ITS CAUSES, SYMPTOMS AND TREATMENT."

THERE are times when a physician feels the need of counsel. There may be something difficult or obscure about the case, or he has failed to find the right remedy to cure the patient. Then, again, the family may be dissatisfied with the progress of the case and ask for counsel. In very many cases, I am sorry to say, another physician is called in merely to bolster up the opinion, to confirm the diagnosis of the attending physician, to put his seal of approval on what has been done for the patient. He reports to the family with a great deal of satisfaction that "the consultant agrees with

my diagnosis, and he says that I am doing all that can be done for the patient."

I have known of doctors being called in consultation on a case where they told the attending physician one thing in the consulting room, the family something else, and the neighbors something entirely different. Such men are not to be trusted, and are not the kind of men to call in consultation.

What should be the real object in calling another physician in consultation? There can be but one answer to that question: to help a doctor *cure* his patient. If he can't do that, why call him in consultation?

I have in my practice had to call for counsel a few times, and when I did, I always sent for a doctor whom I thought would know more about the case than I did. I always selected a doctor who had a reputation for *curing* his patients. It made no difference to me whether he agreed with my diagnosis or not. If I was wrong in my diagnosis, I wanted to know it; but, most of all, I wanted his advice as to *how* to *cure* my *patient*.

I have known of doctors called in consultation who would be all right in the consulting room, agree with all the attending physician had to say; they would pat him on the back and tell him he was "a good fellow and knew his business." Then when this same consulting physician got a chance to talk alone with some member of the family, he would say: "Of course, you know, the doctor has not had much experience, and don't understand cases like this one. I am very sorry that you did not call me at first, for I could have saved the patient," etc. etc.

How many good doctors have been "stabbed in the back" and undermined by the *devilish insinuations* of the consulting physicians? This happens so frequently that we often ask ourselves the question: Is there such a thing as honor and decency in the medical profession?

In conversation with a medical friend of mine, he mentioned a prominent consulting physician (since dead). He said of him: "Whenever he is called in consultation he always tries to get the patient away from the attending physician." This form of *treachery* is *not* an uncommon thing amongst our doctors, "more's the pity."

A doctor who has a mania for "operations" is not a *safe* man to call in consultation, for his hobby is surgery; he can't see anything outside of that. A physician's reputation depends

solely upon the *cures* that he makes. Every *cure* that he makes, either alone or through the advice of a consultant, adds just so much to his reputation, and binds the people more *closely* to him. Therefore, in a difficult case he will naturally call on a physician as counsel whom he thinks will *help* him *cure* his patient.

A good consulting physician should be a *broad-minded*, *liberal* man, a progressive man, one who is "up to date," who has the *best* there is in medicine, a physician who has had considerable experience in the successful treatment of difficult cases. If a physician *cannot* cure the diseases common to our country, he will not be of much *help* to you in the consultation room. Very many doctors called in consultation are well posted on the technical part of their profession, but are *weak* on therapeutics. Such men are not of much use in consultation. A *narrow-minded*, bigoted man, a *one-idea* man, the man with a fad or hobby will not be of much help to you in the consultation room either. A physician who *knows* *materia medica* is a "Tower of Strength" in the sick room, a *Godsend* to a brother physician in the consulting room.

A friend of mine in telling me about a certain physician said: "When that doctor has counsel, he always calls Dr.—, and that doctor loses about every patient he has." Of what earthly use is such a man in the consultation room? If he can't cure his *own* patients, he certainly can't *help* anyone else cure *theirs*.

A physician who is building up a reputation upon the *cures* that he makes is building upon a *solid* foundation. A physician of that kind is a *safe* man, and a good man, to call in consultation, for his skill, his knowledge in healing the sick will be of *real*, practical help to you. The most of us know that *book knowledge* of *materia medica* is one thing, but actual *clinical* experience with the remedies is an entirely different thing. Therefore, a real knowledge of *materia medica* must be learned by *testing* the remedies at the bedside of the sick. This is the "acid test" of what a remedy will really do for the sick.

In my study of *materia medica* I took up the best book I could get on *materia medica* of a certain school of medicine. I studied it early and often, until I had a working knowledge of the remedies of that school of medicine. Then I practiced that system of therapeutics *exclusively* for several years, in

order to test the remedies myself at the bedside of the sick. In this way I have, at different times, practiced for several years the regular, eclectic, homeopathic, physio-medical and bio-chemical schools of medicine. This, in my opinion, is the *only* way to *study* materia medica, if you want to know it. To accomplish this task it has taken nearly fifty years, but it has been time well spent, and now in the "sere and yellow leaf" I can say, as in the Talmud: "I know my power, because I have learned from many teachers." "I would not part with the knowledge that I have of materia medica for all the wealth of a Rockefeller for it is *the* thing that has helped me to "do things" in my profession; it is *the* thing that has *helped* me be of real assistance to a brother physician when he sent out an "S. O. S."

A physician who *knows* the materia medica of *all* schools of medicine has *all* those resources to draw upon in his battle with disease. In his *power* over disease he becomes almost invincible, for he can most always find a remedy to fit the case, and thereby save a human life. In my time I have been called into forty States of the Union in consultation with physicians of all schools of medicine. When I am called in consultation with a brother physician I always keep this *one* thing in mind, that my *business* there is to try and *help* him *cure* his patient, and I concentrate my mind on the *one* thought—to give him the *best* there is in me. I take just as much *interest* in *trying* to *cure* the case as if it was my *own* patient. And when the sick person gets well, I am just as *pleased* as if it had been my *own* patient.

Doctors do not always carry out the advice of the consulting physician. I have seen remedies given and something done that was absolutely contrary to my instructions, thereby interfering with the remedies I had suggested and lessening the chances of the patient's recovery.

The consulting physician and the family physician must, first of all, have confidence in each other. They should be open and frank with each other at all times and in all places. The treatment mutually agreed upon in the consulting room should be carried out carefully and honestly; if not, then of what use has the consultation been? When a course of treatment has been agreed upon, a schedule should be made out, outlining how and when each remedy prescribed is to be administered, as well as written instructions that may be neces-

sary to serve as a guide to the nurse. The family physician gives the schedule to the nurse, and she is expected to carry out the plan of treatment in the written instructions.

It sometimes happens that different members of the patient's family will "butt in," criticise or find fault with the treatment, and say how they think the case should be treated. In such cases it is best to pick out some one in the family, generally the head of the family (the most level-headed person), and give him or her to understand that the nurse has her definite orders, and that she must not be interfered with.

You may be called in consultation with a physician and find his treatment has been entirely different from what you would have given, but in such cases be chary of your criticism. There are times when "silence is golden," and this is one of them. You may say: "Now, doctor, if this was my case, I should treat it so and so."

If you are called in consultation with a doctor of a different school than your own, unless you know the *materia medica* of his school of medicine, you cannot talk intelligently with him about the remedies he has used. Therefore, any criticism from you on his treatment of the case would be in bad taste and entirely out of the question.

Some consulting physicians endeavor by their talk and manner to impress the family with the idea that they are "it," that they "know it all," and that the family physician is a mere cypher in their estimation. If you are a smarter man than the attending physician, rest assured the family will find it out without your taking special pains to inform them of this fact. The American people are intelligent, and they can generally tell a real physician when they meet him.

A consulting physician should be very careful what he has to say to any of the family or the patient. When he is in consultation he should give the impression to the family that he respects their family physician and has confidence in him. If he can do so, it is always best to say something nice about the doctor and about his treatment of the patient. This leaves a good impression upon the minds of the family and the family physician. A foolish grin, a sneering remark (behind the doctor's back) has been like a "stab in the back" to many a good doctor, and has helped to undermine him in the confidence of the family.

There are certain individual rights that every American

citizen has, and they are a personal matter with him: (1) To choose his own church, his own form of religion; (2) to decide what his politics shall be and what party he shall identify himself with; (3) to what school of medicine he shall belong, or what system of therapeutics he shall practice. I repeat, these things are personal matters, and you have no right to ask a doctor what school of medicine he belongs to, any more than you have to ask him what church he belongs to, or what political party he is identified with.

Oh, if we could only forget our isms and our pathies, all our prejudice, our petty jealousies, and only remember that we are physicians here to heal the sick, what a grand world this would be, and how much good we could accomplish for God, for our profession and for suffering humanity!

A CLINICAL CONSIDERATION OF INDIGESTION.

A MEDICAL CLINIC CONDUCTED AT THE HAHNEMANN MEDICAL
COLLEGE AND HOSPITAL OF PHILADELPHIA.

BY

G. HARLAN WELLS, M.D., CLINICAL PROFESSOR OF MEDICINE.

Gentlemen: I desire to direct your attention this morning to that very common and numerous class of patients suffering from what is commonly known as "indigestion." I have no doubt but that every one of you has a large number of such among your clientele. In fact, dyspepsia has been jokingly called the "American Disease." It is not my intention to discuss the matter from a highly technical standpoint and to present all of the elaborate and intricate tests that modern science has developed in connection with the investigation of these patients, but, rather, to outline to you the manner in which we handle these cases in our wards from a diagnostic standpoint.

The first question that we must settle when a patient comes before us suffering with gastric complaints can be briefly stated as follows:

Are the symptoms due to some primary disease of the stomach or is the gastric disturbance secondary to disease of some other organ or tissue?

Your decision on this point is a matter of great importance. Cabot, in a study of more than fifteen hundred cases in the Massachusetts General Hospital, found that in only about one case out of six of patients presenting gastric disturbances were the symptoms due to actual diseases of the stomach itself; $84\frac{1}{2}$ per cent. of the cases presenting gastric symptoms were found to be secondary to diseases of some other organ. My own observations have, substantially, corroborated Dr. Cabot's findings and I may say in a general way that about 20 per cent. of patients suffering with gastric symptoms have actual disease of the stomach and in 80 per cent. of the cases the causes must be looked for elsewhere.

Practically speaking, there are but *two primary organic diseases of the stomach—ulcer and cancer*—and if these can be excluded, the chances are nine out of ten that some other organ than the stomach is primarily at fault.

The following conditions are those that most frequently give rise to secondary gastric symptoms—diseases of the heart, 25 per cent.; tuberculosis, 18 per cent.; pneumonia and diseases of the blood, 18 per cent.; neuroses, 20 per cent.; chronic nephritis, 10 per cent.; diseases of the liver, 10 per cent.; alcohol, industrial overstrain, improper habits of eating, a considerable proportion difficult to enumerate.

I have gone into this matter of diseases that secondarily produce gastric symptoms in some detail, because there is a great tendency on the part of the practitioner and of the specialist to assume too readily that gastric symptoms indicate organic diseases of the stomach. Glaring mistakes are being made because of this assumption. Only recently there was brought to my attention the case of a young man of a very wealthy family who suffered from marked gastric disturbance with loss of weight and general impairment of health. He was brought to Philadelphia and placed under the care of a prominent gastro-enterologist in one of our largest "old school" institutions. His condition was carefully studied by test meals, examination of stools, X-Ray and fluoroscopic examinations, etc., and the patient finally returned to his home with a diagnosis of chronic gastritis with instructions as to a special diet that should be instituted. The patient's health steadily failed and after a few days the family called a general practitioner of the homœopathic school who lived in a near-by town and who at once suggested the probability of tuberculosis of the

lungs, which diagnosis was confirmed by a bacteriological examination of the sputum. The patient was then placed on appropriate treatment with marked improvement in his condition. The father of the lad afterwards remarked to a patient of mine that "After all the homeopathic physicians were the only ones that seemed to have any sense." The point I wish to emphasize then is that the *investigation of a patient presenting gastric symptoms should not stop with an examination of the stomach itself*, as it is a well established fact that four times out of five, the primary cause of his symptoms will be found in some other part of the body.

The second question that must be decided in every gastric case can be stated as follows:

Is the disturbance of the stomach organic or functional?

As previously stated there are but two important organic diseases of the stomach, namely cancer and ulcer, with the various complications which follow them, such as pyloric obstruction, perigastric adhesions, hour glass stomach, etc. The functional disturbances of the stomach are, of course, numerous, and include the various types of nervous dyspepsia, motor, secretory and circulatory disturbances.

In attempting to decide the question of the functional or organic origin of the gastric symptoms in any given case we can obtain much light from a consideration of the following factors:

First, the symptoms in organic disease of the stomach are fixed and definite; pain, vomiting and other symptoms are distinctly aggravated or ameliorated by the taking of food, and the entire symptomatology of the disease follows along definite and consistent lines. Functional cases, on the other hand, are characterized by the marked variability of the symptoms. At one time the patient is made worse by eating and at other times he is improved by the taking of food. The vomiting seems to follow no fixed or definite rule and it is difficult to elicit any fixed or definite course in the development of the symptoms, particularly in the neurasthenic cases which are very numerous. Remarkable variations in the symptoms occur and they are particularly aggravated at times if the patient is disturbed or has passed through some unpleasant mental experience. Under surroundings that are agreeable to the patient a large meal of notoriously indigestible food may be eaten

without discomfort; while at other times the simplest sort of food causes great distress.

Second: Patients with organic stomach disease almost invariably show some loss of weight or impairment of nutrition and this impairment of nutrition usually bears a definite relation to the length of time the disease has existed and to the severity of the symptoms. Functional disturbance of the stomach on the other hand may last for years and the patient may complain most bitterly of gastric distress and yet maintain his normal weight and have every appearance of being well nourished.

Third: The test meal in organic diseases usually reveals the presence of blood or shreds or shows some distinct and permanent alteration in the quantity or quality of the gastric secretions. The ability of the stomach to empty itself is frequently interfered with in organic cases. The persistent presence of distinctly delayed motility may be accepted as certain evidence of organic gastric disease. In functional disorders, the gastric secretions are frequently entirely normal; blood pus or shreds are never persistently present and delayed motility if present at all is usually of a minor degree.

Fourth: The X-Ray examination in organic gastric disease reveals a permanent and persistent alteration in the normal outlines of the stomach and especially of the pyloric end of the stomach in a large proportion of cases.

ROUTINE EXAMINATION OF PATIENTS HAVING GASTRIC SYMPTOMS.

In order to arrive at an intelligent understanding of a gastric case for the purpose of diagnosis and treatment, it is necessary that we should follow a systematic method of examination. This examination should be comprehensive and yet as simple and practical as possible.

The following is the method of examination that we have carried out in our clinical work in the Hahnemann Hospital with satisfactory results:

First: A careful clinical history of the patient. This is undoubtedly the most important step in the diagnosis of a stomach case. Many physicians are disposed to feel that they are seriously handicapped in handling these cases because they have had little laboratory training. The facilities afforded by

large laboratories are, perhaps, not available to them. For the encouragement of such men, let me say that the careful study of the patient's symptoms and their manner of development is more likely to lead to a correct diagnosis than any other method of examination, no matter how modern or how intricate it may be. This view is not merely a personal one but is also held by Conheim, Mackenzie and many other of our most famous clinicians.

In eliciting the history, it is necessary to go back to infancy and trace the patient's health up to the time he presents himself for examination, particularly inquiring into the symptoms that first attracted his attention to his present illness. While the gastric symptoms, of course, demand close consideration, it is essential that the inquiry should not be confined to gastric symptoms alone but all of the patient's complaints, no matter to what part of the body they may be referred, should be inquired into.

Secondly: The physical examination. If the physical examination were to be confined merely to the stomach, we should get but little light from this source in the diagnosis of patients with gastric symptoms. Bearing in mind the fact that 80 per cent. of gastric cases are secondary to disturbances in some other portion of the body, we should make a careful examination of the heart, lungs, liver and gall bladder, the appendix, kidneys and the nervous system. The examination of the alimentary canal itself should begin with the mouth, the condition of the teeth and tonsils. Palpation of the stomach is particularly useful in detecting tumors or inflammatory masses about the stomach. I have found it a method of very little value in the diagnosis of ulcer as the typical point of tenderness of text-books is rarely found in actual practice and its absence by no means enables us to exclude ulcer as a diagnosis. Let me also say that the attempts to outline the size and position of the stomach by means of percussion without dilating the stomach with air or gas are notoriously misleading. One would never be sure of the actual size and position of the stomach unless it is dilated with air through a tube or radiographed after an opaque meal.

Third: The use of the stomach tube. It is easy to overestimate the importance of the stomach tube and test meal in gastric diagnosis and yet, when intelligently employed it is extremely valuable. I employ the following simplified technique:

About 10 o'clock in the evening the patient is given twelve black currants and two lettuce leaves. No food or medicine is to be taken into the stomach until the following morning at 8 o'clock, at which time the patient is given two slices of bread without crust and without butter and two glasses of moderately cool water. One hour after this meal the tube is passed, the contents of the stomach removed and the stomach is thoroughly washed with sterile water. With the tube well in place the stomach is dilated with air. By this technique we are able to determine four important factors:

A. The motor function of the stomach. The absence of currants and of the lettuce leaves in the stomach washings indicate that the pylorus is patulous and that the stomach has been able to empty itself in ten hours. If further test of the motor functions of the stomach is deemed necessary currants and lettuce can be given and the stomach washed out in four, six or eight hours.

B. The secretory functions of the stomach. This is determined by the chemical analysis of the contents.

C. The size and position of the stomach. With the stomach distended with air through the tube we are able to exactly outline the size of the stomach and its position both in the recumbent and standing positions.

I, of course, recognize the fact that there is a theoretical objection to this technique because the test meal is given in the morning without washing the fasting stomach prior to giving the meal. Practically, however, I have found in many cases that it is difficult to get the patient to swallow the tube twice within an hour and if there is any distinct degree of retention we are practically sure to recover some of the currants and lettuce in our washing after the test meal. Should there be the least suspicion of delayed motility, however, the six or eight hour test should be made as previously suggested.

Fourth: The X-Ray examination of the stomach. This valuable method of examination has been more or less discredited by the efforts of radiographers to draw hair-splitting and unwarranted deductions from the radiographic plates. As valuable as this method is I should advise you against accepting as an established fact any deductions by the radiographer that are not corroborated by the general symptomatology of the case. This is especially true if the shadows on the plate are indefinite and ill defined. Someone has said, "Do not pin your

faith on shadows," and it is for the internist and surgeon to bear this in mind in connection with the gastric radiographs.

A CLINICAL CASE.

The patient that I wish to present to you today, George L., is fifty-one years of age. **Weaver by occupation**; **Caucasian** by birth.

Chief Complaint: Pain in the epigastric region, after eating.

Family History: His father died at forty-five years of age of unknown cause. Mother died at eighty-two.

Personal History: The patient has been in good health all his life with the exception of his gastric symptoms. He has been accustomed to drink large quantities of tea and coffee; he has used alcohol in moderation.

History of the Present Illness: Fifteen years ago, the patient states, he began to have some discomfort in the epigastric region which gradually increased until the sensation developed into actual pain which would come on four or five hours after eating.

He says that the pain was not severe, but persistent, and that it was relieved by taking soda, peppermint or by drinking hot water. At times he would go several weeks or months without pain but gradually the intervals of freedom from pain became shorter. At times the pain would be accompanied by water brash and by excessive formation of gas. The character of the food eaten seemed to have something to do with producing the pain. Soft foods, such as milk and eggs having no bad effect, while acid foods caused an aggravation of the suffering.

Five years ago the patient began to lose his appetite and three years ago he began to have attacks of vomiting. This vomiting at first occurred only after eating a heavy meal but during the past three months he has vomited every night between 12 and 2 o'clock.

About four months ago he noticed a gnawing pain in the stomach appearing about two hours after meals, relieved temporarily by taking food or tea.

Since coming to the hospital it has been found that washing the stomach has completely relieved the vomiting. At no time has there been any blood in the vomited matter and he has

never noticed any tarry blood in the stools. The patient has lost ten pounds during the last three months.

Physical Examination: General nutrition of the patient is fair; his facial expression is normal and his complexion rather florid. His weight is one hundred and five pounds; temperature ninety-eight; pulse seventy-six; respirations twenty. Mouth and teeth in fair condition; tongue is coated white.

The abdominal examination shows a relaxed condition of the abdominal muscles; there is no rigidity and no tender spots over the abdomen. There are no localized bulgings or swellings and the percussion note is tympanitic. There is no palpable tumor or no tenderness about the pyloric end of the stomach or in the region of the gall bladder. The examination of the heart showed no abnormality. The arterial walls are slightly sclerotic; the blood pressure is one hundred and twenty-five systolic and seventy-two diastolic.

The Test Meal showed some remnants of old food, a diminution in the total acidity and a diminution in the percentage of hydrochloric acid. No blood was found in the washings.

The history of this patient is almost typical of a chronic duodenal ulcer. You will observe that during the early stage of his illness the patient complained of a pain coming on four or five hours after eating. This pain was relieved by taking food, by drinking fluids or by the use of soda. There would be periods varying from a few weeks to several months during which the symptoms would disappear entirely and then recur again without any obvious reason.

During the past five years the symptoms have gradually become more constant and vomiting became a permanent and persistent feature. This would lead us to believe that some complication had taken place, most likely a partial obstruction of the pyloric end of the stomach, either from thickening or from adhesions about the pylorus. The X-Ray examinations showed a decided deformity of the lower end of the stomach and also of the first portion of the duodenum. The absence of blood in the vomited matter or in the stools would lead us to believe that there is no active ulceration at the present time. Our conclusions then, from a clinical study of the case would be as follows:

That Mr. L. suffered from ulcer of the duodenum which has led to a partial obstruction of the pylorus with thickening, probably of a fibrous character, throughout the lower portion

of the stomach, the pylorus and the first portion of the duodenum. There would seem to be no evidence of an active ulcer at the present time, on account of the absence of blood in the vomited matter or in the stools, and because of the absence of tenderness on pressure about the pyloric area.

TREATMENT.

On account of the long standing character of this condition and on account of the X-Ray findings, we believe that medical treatment would be of no avail in this case. I have accordingly advised the patient to be operated on with a view of having a gastro-enterostomy or some similar operation performed.

Report of the Operative Findings: On the 22nd of February the abdomen was opened by Dr. W. B. Van Lennep and a firm mass was found involving the pyloric end of the stomach and the upper portion of the duodenum. The mass was resected and a gastro-enterostomy was performed. Dr. J. Dean Elliot made an examination of the mass with the following report: "The specimen consisted of pylorus, about two centimeters and about six centimeters of stomach. The mucosa showed no evidence of active ulceration and the only abnormality was a slight atrophy. The serosa appeared normal but the musculature was thickened throughout the entire section of the stomach. Microscopic evidence was found of mucoid degeneration of the mucosa. No changes were noted in the submucosa or serosa. There was a marked hypertrophy of the musculature with slight increase in fibrous tissue and some round cell infiltration."

These findings, in conjunction with the history of the case would lead me to feel warranted in concluding that the patient originally suffered from an ulcer situated just at or below the pyloric end of the stomach which subsequently healed producing a mild degree of stenosis about the pyloric orifice. These changes probably acted as an irritant and led to a gradual thickening of the musculature and an increase in the fibrous tissue.

TUBERCULOSIS OF THE EYE, WITH REPORT OF CASES.

BY

WILLIAM M. HILLEGAS, M.D., PHILADELPHIA.

PRIMARY lesions are rare, although primary tuberculosis of the conjunctiva is reported. The eye being a closed cavity, and the tubercle bacilli not having any power to penetrate the epithelium of the conjunctiva, or the more dense sclerotic, the scarcity of such cases is readily understood. Affections of the eyes due to tuberculosis are caused most frequently by lowered vitality of the ocular tissues due to general tuberculosis, and the infection taking place by metastasis. Eye complications in active pulmonary tuberculosis are very rare; they occur in the more chronic cases of tuberculosis.

Roger claims that the primary manifestation of tuberculosis may be at a point distant from the source of entrance of the bacillus, and, therefore, believes in primary intraocular tuberculosis.

Every chronic case of eye trouble is suspicious, and if other causes can be definitely excluded, tuberculosis must be considered in making a diagnosis. Heine says that, "There are two ways of estimating the tuberculous nature of an eye lesion: (1) clinical examination of the eye and general examination of the patient, including family and personal histories; (2) the specific reaction to tuberculin." In fact, tuberculous eye diseases were first fully understood after the use of tuberculin for diagnosis.

Primary conjunctival tuberculosis, if ectogenic in origin, is likely to follow an injury to the epithelium, or else is metastatic; is apt to be nodular in character, and is found mostly under the lids. Lupus attacks the lids by direct extension from the skin, usually from the nasal region, but is comparatively rare in this country. The ulcerations of lupus in the eye are invariably accompanied by preauricular or submaxillary adenitis.

Interstitial keratitis in a small proportion of cases is due directly to tuberculosis and is readily confused with cases due to hereditary syphilis; it appears in the form of circumscribed opacities in various layers of the cornea.

Scleritis is quite frequently tubercular in its origin, in-

stead of rheumatic, and especially is this apt to be the cause in those cases which are slow in their development, and not toxic; it generally takes the form of sclerosing keratitis.

Intraocular tuberculosis usually affects the uveal tract, and is generally associated with a ganglionic tuberculosis, which is probably the primary source of infection, and is very rare as a complication of pulmonary tuberculosis. It occurs in young adults usually, and the iris and ciliary body are affected; it is generally of slow development with mild inflammatory symptoms; and is characterized by disseminated yellowish nodules in the iris. The process may, however, become severe, and a destructive plastic iridocyclitis develop, requiring enucleation. Again, there may be a solitary tubercle in the iris, resembling a granuloma, difficult to differentiate from a syphilitic gumma, requiring a Wasserman test for diagnosis. It is well not to be hasty in advising enucleation in eyes with tuberculosis of the iris, as cures are reported at times. The late Dr. J. B. Gregg Custis, of Washington, D. C., reported a case of undoubted tubercular iritis, the diagnosis being confirmed by Dr. Wm. King, which he cured in five or six months with baryta jod. 6 x. Dr. Van Ruck, of Asheville, reports one case of miliary tubercular nodules in the iris in which the nodules disappeared during the treatment of the patient with watery extract of tubercle bacilli. Several old school authorities report cases of spontaneous recovery by absorption.

In the later stages of miliary tuberculosis there appears quite frequently a typical form of choroditis, rapid in appearance and development, but rather too late for diagnostic value. Disseminated choroiditis is more frequently due to tuberculosis than supposed, and all cases should be investigated with tuberculin.

Case—W. L., male, age 11 years when first seen with a disseminated choroiditis in one eye. Vision, 20/200. During the time I treated him, he was taken to two hospitals, in both instances the advice was given to enucleate this eye, that it was a tubercular lesion, and would attack the other eye. My belief was that if the other eye did develop a similar lesion, it would not be by either direct or sympathetic involvement, but rather from the initial source of infection, which was certainly not the eye. Fortunately, enucleation was not performed, as the vision improved under treatment to 20/40. The treatment used was the sub-conjunctival injections of cyanide of mercury 1 to

1500. Seven years later the same lesion developed in the other eye, and was rapidly destructive to the choroid coat and to the vision; an exacerbation also developed in the eye first attacked. In the eye last attacked the vision is pretty well blurred at 20/100, while in the originally diseased eye the vision is now 20/40 scant. A VonPirquet test was not made during the first attack, but was taken during the recurrence and was positive. Wasserman test was negative. Lung examination negative. There was a marked systemic reaction to tuberculin administered hypodermically, but a thorough course of treatment with tuberculin did not improve the ocular condition. No effect followed the cyanide of mercury this time. Examination of the accessory sinuses was negative. There was a marked tubercular family history.

Of more interest to the general practitioner perhaps are the affections of the eye due to a tuberculous diathesis. This question of "diathesis" is a difficult and puzzling one (Hahnemann's Organon to the contrary notwithstanding.) Scrofulous diathesis—strumous diathesis—tuberculous diathesis—who can tell the *exact* difference? But we *can* with surety say that a child may be in the *power* of tuberculosis, though tubercle bacilli may not be demonstrable anywhere in the body. The writer doubts very much that *most* cases of interstitial keratitis in children are caused by inherited syphilis, or that most cases of phlyctenular conjunctivitis and keratitis are scrofulous. Some so-called scrofulous affections of the lids and conjunctivae are often due to a tuberculous diathesis, and the diagnosis confirmed by a VonPirquet test. In such cases we usually find a family history, and in the personal history of the child we hear of an enlarged flabby abdomen and persistently sweaty head. Blepharitis; phlyctenular conjunctivitis; keratitis, especially the interstitial form—are more frequently due to a tuberculous diathesis than usually credited for. And the point to emphasize here is that these diseases are rarely entirely local in their causes, and that while local measures must be used in their treatment for the relief of distress and the cure of the condition, still, general hygienic, constitutional, dietetic, and medical treatment are of equal importance, if not more so.

In all such cases examine the patient carefully for signs of tuberculosis in other organs, lungs, joints and glands, and by all means make a VonPirquet test, which is fairly dependable in children.

Case—E. R., aged 10 when first seen, with an interstitial keratitis. History—Has four brothers and sisters all older than he is and healthy and hearty. This boy weighed 8 pounds at birth, at three and a half months of age he began to fail, and his condition was called "marasmus." At the age of 2 years he weighed less than at birth. The teeth turned black as soon as they came through erupted. He was the color of "an Indian," brown. Had nocturnal enuresis from birth. He did not crawl until six years old, or later, and walked with assistance a year later, with feet turned well out, and was weak in the legs. There was some inarticulate attempt at speech at age of six or seven years. He developed convergent strabismus at the age of three years. Luetic family history denied. Condition at time of first examination—in April, 1914. Walks with knees bent in and knocking, feet everted to almost right angles, must shift along, cannot walk evenly, but seems of ordinary height and development. Sluggish mentally, and his father says he is quite gloomy at home. Appetite poor. Has nocturnal enuresis constantly. Speech inarticulate, but seems to know what he tries to say, and talks rapidly. He has a high palatal arch, but no adenoids, and his tonsils and nasal fossae are normal; he is not tongue-tied. Six weeks before I saw him, he developed marked photophobia, and at a hospital, this condition proved so intense or the patient intractable that he was given a general anaesthetic twice in order to examine the eyes. After patient work at my office both eyes were examined, and a diagnosis made of severe irido-keratitis, interstitial in form. The diagnosis at the hospital was that it wasluet in origin, and he was given mixed treatment without benefit. This etiology I doubted, and my contention was upheld by a negative Wasserman, and a positive VonPirquet. I did not wait for these laboratory tests, however, but instituted the following treatment: Local: atropine, dionin, hot compresses. Internally; cod liver oil, calcaria iod 4x.

The calcaria iod. was the remedy, and was not changed for many months. Ethyl-morphin-hydroiodide powder was later substituted for the dionin solution for its absorptive affect, with undoubted benefit. The improvement in the keratitis and its severe symptoms was rapid and marked, and in a very few weeks the boy was using his eyes. The following winter he developed a hacking cough, and looked peaked, al-

though his eyes were fine; ars. lod. 2x. was given, but he did not improve until I went back to the calc. iod.

The following summer he developed hay fever symptoms, which responded nicely to *allium cepa*. The remarkable part of it all was the rapid improvement in his general health, his appetite improved; his disposition changed from a fretful lad to a cheerful, bright, active one. His nocturnal neuresis entirely disappeared, and never returned. He began to walk better, and later to talk better. A thorough examination was made in December, 1915, when he was 12 years old. His vision was 12/100 in each eye, and he could read print with a little effort and could write legibly, but slowly; his mentality was wonderfully improved, and he was sharp in his answers, which I could understand with but little difficulty. The only neurotic symptom was in his fingers, a restless twisting. He walked well, and looked healthy, and had increased in weight. There were, of course, some scars in the various layers of the cornea, which will probably never absorb entirely. I have not seen him since, but have seen other members of the family, his sister recently, and the report is that he is well and reads. A triumph for homœopathic prescribing and a proof of the value of diagnosis.

EQUIPMENT OF THE NEWLY COMMISSIONED MEDICAL OFFICER.

WRITTEN BY MAJOR FREDERICK R. GREEN, M.R.C., FOR THE
JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
AND REPRINTED FROM THAT JOURNAL.

WHAT outfit does an Army medical officer need, and how much must he spend for his equipment? This question is probably being asked today by thousands of physicians, either those who have already accepted commissions in the Medical Reserve Corps or those who are seriously considering doing so. The civilian doctor about to enter Army life reads with growing confusion of cots, bedding rolls, trench boots, folding buckets, basins and lanterns. He hesitates between two dilemmas, and either comes to camp without the things he needs or arrives burdened down with an immense amount of baggage which

he soon finds is not necessary. He is told on the one hand that a complete outfit can be purchased for \$200, and on the other that his equipment will cost him from \$600 to \$800. What does he really need, and where can he buy to the best advantage?

These questions cannot be answered by the presentation of any one list. The answer rather is that the Army officer, like the technical worker in civil life, accumulates his working outfit as he **needs it**. There is no more reason for the Army officer to purchase his entire equipment at once than there is for a hospital intern, just beginning to practice, to purchase a complete surgical equipment before opening his office. The extent of the outfit needed depends on the duty to which an officer is ordered. Is he going to training camp for a three months' course? Is he going direct to a base hospital? Or is he to be sent abroad at once? In each case his necessary equipment will differ. But few men are now being sent abroad without army training, and many of the medical officers ordered to base hospitals direct from civilian life are now being ordered into the training camps for delayed training. So in the average case, we can assume that the newly commissioned doctor will be ordered to training camp where he will stay for one to three months, that he will then be sent to a base hospital or assigned to a field hospital ambulance company or evacuation hospital, and that at the end of two or three months more he will go to France with his organization or be sent with a replacement detachment.

But this is in the future. What the newly commissioned officer wants to know is, "What must I get before I leave home for the training camp?" The best advice to give him is, "Buy only what is actually necessary to get you to the training camp; then complete your equipment during your stay in camp by getting what you find you need from time to time by actual experience, and secure the additional equipment for overseas service when you know you are going." There are many reasons for this advice. An officer who attempts to buy his entire equipment before leaving home may be discharged for physical disability and find himself with an expensive equipment for which he has no use. He may be assigned to restricted service, in which case he will not need an overseas outfit. No matter what his assignment, it is much better to purchase his outfit as he needs it from personal experience

rather than to attempt to buy it complete on some other man's advice.

Equipment, then, may be divided into five groups. These are:

1. What an officer needs when reporting for duty. This he must buy before he leaves home.
 2. Things he already has or can bring from home.
 3. What he will need in a training camp or base hospital. These things he can and should buy after he reaches his station.
 4. Articles, not necessary, but which may be purchased if desired.
 5. Additional articles for overseas service.
- Taking these up in order, the first list would include:

FIRST LIST.

| | Minimum | Maximum |
|---------------------------------|---------|----------|
| Uniform | \$35 00 | \$75 00 |
| Cap (regulation) | 2 50 | 2 50 |
| Pair Shoes | 4 50 | 18 00 |
| Pair Puttees | 5 00 | 18 00 |
| Set Collar and Rank Insignia... | 2 00 | 2 00 |
| Belt | 75 | 75 |
| Military Locker Trunk | 6 12 | 15 00 |
| Bedding Roll | 9 00 | 25 00 |
| | <hr/> | <hr/> |
| | \$64 87 | \$156 25 |

SUGGESTIONS FOR PURCHASING

In purchasing a uniform, an officer has the same liberty that a civilian has in buying his clothes. He can get them ready-made or have them made to order. He can get a cheap suit or an expensive one. Officers' uniforms are made of serge, wool or whip cord. They range in price from \$35 for a ready-made serge or wool uniform to \$75 or \$80 for a whip cord uniform made-to-order by a military tailor. A good uniform is a necessity so long as one remains in the service. It is advisable to get as good a uniform as one can afford. Wool is too hot for summer. Whip cord wears better than any other fabric, but is heavy and stiff. Probably the

best thing for the average man is to get as good a serge uniform as he can afford. Ready-made uniforms can be secured from dealers in any large city as Marshall Field, Mandel Brothers and the Hub in Chicago, or Wanamaker in Philadelphia, or can be ordered by local clothiers from Hart, Schaffner and Marx, Kuppenheimer or other well-known makers of ready-made clothing. A regulation cap can be obtained from any dealer. It is worn only for dress, the field hat being worn in camp. Shoes cost from \$4.50 in calf to \$15 or \$18 in officers' shell cordovan dress shoes. In whatever grade, they should be on the regulation Munson last. This is the best shoe ever made. Already shoemakers are beginning to modify this last in order to approximate the conventional narrow toed shoe. Insist on getting the original Munson last. Don't waste money on high priced cordovan dress shoes. You don't need them and you won't wear them. Get the regulation calf-skin shoe and save your money for other things. Be sure the shoe fits, especially that it is wide enough. The same advice can be given about puttees. Prices range from \$5 for cowhide to \$18 for shell cordovan. Get a good pair of cowhide puttees, not too heavy, and be sure they fit, especially that they are not too long in the heel or under the knee. Let those who will pay \$15 or \$18 for pigskin or cordovan. Five or six dollars is enough, especially for camp wear. The belt should be the regulation webbing belt. Insignia include two U. S. R. and two caducei in bronze for the coat collar and two rank insignia for the shoulders. If you want to spend money, you can get sterling silver bars, but as you are going to be promoted soon, you might as well save your money and get white metal at 40 cents a pair. A regulation military locker trunk will cost from \$6.12 to \$15, depending on quality. Have your initials or name marked on each end and your name with "M. R. C., U. S. A.," on the top. A bedding roll is a canvas case for your mattress and bedding. It is also the catchall in which is packed everything that doesn't go in the trunk. It comes in dark brown or khaki colored canvas, with webbing straps. Prices range from \$9 to \$25. The \$9 roll is just as good as any, but the straps are generally too small and too short. Get a pair of extra long webbing straps or two long trunk straps. Have your name stenciled on the outside of the bedding roll. What goes in the roll and how it should be packed will be considered later.

This is all that will be needed for the man ordered to report to a training camp or base hospital. It will enable him to travel to his post and report in presentable and proper condition without taking time or going to the expense of buying a lot of things that he won't need at all or that he won't need for a long time.

ADDITIONAL ARTICLES BROUGHT FROM HOME.

In addition to these purchased articles, what does one need to bring from home? This is the second list. It comprises: Pajamas; blankets; comfort or quilt; sheets, narrow, three pairs; pillow cases, three; slippers; bathrobe; tennis shoes; underwear; socks; handkerchiefs; toilet cases; white shirts; white collars; black tie; bath towels; blanket coat; coat hangers. Blankets for temporary use can usually be drawn from the quartermaster on memo receipt. Each officer should have at least two O. D. (olive drab) wool blankets for use in camp. For foreign service he is required to have four. If you can get the regulation U. S. O. D. wool blanket, get at least two; better three or four. If not, bring a pair of heavy blankets, preferably dark colored. Hudson Bay Company blankets are excellent if one can get them, in dark blue or gray. One or two cotton comforts or quilts add greatly to one's comfort in sleeping. Two blankets and a comfort are warmer than four blankets. Sheets are optional and depend entirely on one's personal preferences. Some officers prefer sheets and pillow cases. Others sleep between blankets. If you want sheets, bring three or four pairs of narrow ones for an Army cot. An ordinary sheet, split lengthwise down the middle and hemmed, will make a pair of about the right width. Three or four pillow cases may also be enough. Slippers may be leather or felt, but should be soft and easy. Bring an old bathrobe to wear to the latrine when bathing. If you have an old pair of rubber-soled tennis or gymnasium shoes, slip them into your trunk. They will give you much comfort in going to the bath house in wet weather and will keep your slippers dry. Underwear depends on personal preferences; wool, lisle or cotton, in two-piece, union or B. V. D., as desired. Bring plenty of it, whatever it is, for frequent changes are necessary. As to socks, probably the controversy will never be settled between those who like wool and those

who don't. Some won't wear woolen socks; some won't wear anything else. *De gustibus non est disputandum*. Bring what you like, at least six pairs, and twelve are better. Handkerchiefs, at least twelve or better twenty-four, not too fine; some of these can be khaki colored. Some kind of toilet case is advisable; otherwise, toilet articles are scattered and lost. The Fitall cases in leather or canvas in varied sizes are excellent. One or two white shirts beside the one worn to report in and half a dozen white collars may be brought for special occasions. Leave shirt studs, valuable cuff buttons, watch chains, etc., at home; also valuable watches. Plain cuff buttons, a leather watch guard and a cheap but accurate watch are best. A black, narrow four-in-hand is the only tie worn. Face and hand towels are soon discarded. Large, heavy bath towels serve all purposes. A blanket coat for evening wear in quarters is very comfortable. Half a dozen clothes hangers in wood or wire can be brought from home or bought at a 5 and 10-cent store. A stout and roomy laundry bag with a gathering string at the top and loops with which to hang it is a great convenience. All articles should be plainly marked. In a company barracks with a hundred men, *meum* is very often hard to distinguish from *teum*. Of course, all these articles can be purchased at the camp exchange or at civilian stores after reaching camp, if desired.

PACKING.

Now as to packing: Spread your bedding roll flat on the floor; turn out the flaps, head, foot and sides; fold blankets, comforts, quilts, sheets, etc., as nearly as possible the size of the bedding roll; lay in top of your bedding, as evenly as possible, your bath robe, blanket coat and anything else that you haven't room for in your trunk; fold the head and foot flaps, then the side flaps; tie the strings that hold the flaps in place; if you have a cot, place it, tightly strapped, across the head of the bedding roll; begin at the head and fold the roll over as tightly as possible; strap far enough from the ends to prevent slipping off; check the roll as baggage with your trunk.

TRAVEL ORDERS AND REPORTING FOR DUTY.

As to procedure when you get your orders, "travel orders" always come from the Adjutant-General's Office and not from

the Surgeon-General or from a bureau chief. Telegrams or letters from any one else than the Adjutant-General are preparatory, but they are not travel orders. Your telegram should read:

Washington, D. C., March 1, 1918.

FIRST. LIEUT. JOHN C. SMITH,
Jonesville, Wis.:

You are assigned active service. Proceed to Fort Riley, Kan., and report, April 15th, Commanding Officer, M. O. T. C., for course of instruction. Travel directed necessary in military service.

McCain.

Several precautions should be exercised regarding this telegram. Do not accept it over the telephone. Insist on the local telegraph office giving you a written copy. When you receive it, be sure your name is correctly spelled and that the name of the receiving office is on the telegram. This telegram is worth money to you. Without it you cannot collect mileage. If your name is misspelled or if the town where you receive it does not appear, it is worthless. See that it is correct. Having received it, do not throw it into the wastebasket or leave it on your desk. Don't put it in the pocket of your civilian coat or lock it up in your trunk. Put it in your pocket-book with your money, and don't lose it. If you want transportation, take your orders to the nearest quartermaster or recruiting officer. He will issue a transportation certificate and stamp his notation on the back of your orders. Exchange the transportation certificate at the railroad ticket office for a ticket. Don't let the ticket agent take up your telegram.

When you get to your destination, ask any officer or non-com. for the Headquarters Ambulance. There is always an ambulance to meet each train for the convenience of incoming officers. Be sure to go to the place your orders direct you to report to. If ordered to report to the Commanding Officer of a Base Hospital, don't report at Fort Headquarters. If ordered to report to the Commanding Officer, M. O. T. C., don't report at the Base Hospital. Go where you are told. When you get to Headquarters, ask for the Adjutant and hand him your orders. He will enroll you and assign you to quarters or tell you where to report.

ADDITIONAL EQUIPMENT FOR TRAINING CAMP.

If ordered to a training camp, what additional equipment will you need?

ADDITIONAL EQUIPMENT FOR TRAINING CAMP.

| | Minimum | Maximum |
|------------------------------------|----------|----------|
| Extra Serge Suit | \$35 00 | \$50 00 |
| Two Pairs Munson Shoes | 9 00 | 16 00 |
| Three or Four Flannel O. D. Shirts | 13 50 | 32 00 |
| Field Hat | 2 50 | 6 00 |
| Hat Cord | 1 50 | 1 50 |
| Khaki Suit | 12 50 | 18 00 |
| Three Pairs Khaki Breeches | 10 50 | 18 00 |
| Sweater | 7 50 | 10 00 |
| Rain Coat | 2 60 | 50 00 |
| Two O. D. Blankets | 6 12 | 6 12 |
| Extra Belt | 75 | 75 |
| | <hr/> | <hr/> |
| | \$101 47 | \$208 37 |

The extra serge suit is needed for a working suit, as long as serge is worn. Three pairs of shoes worn alternately will last five times as long as one pair worn continuously. At least three flannel shirts are needed. Four are better. They cost from \$4.50 to \$8 each. Get coat shirts of medium weight. The field hat is worn exclusively in camp. You can pay \$2.50 for a regulation hat or \$6 for a Stetson or Dunlap. Have your hat cord sewed on. Get an officer's hat cord, black and gold. Don't make the mistake the rooky did who came to camp wearing a General Officer's gold cord. He said that his girl gave him the handsomest one she could find as a Christmas present and he didn't like to hurt her feelings by not wearing it. Khaki is worn during warm weather. Get one blouse and three or four pairs of breeches. Be sure the breeches have hip pockets. Some haven't. Those that button at the knee are better than those that lace. Get a sweater, O. D. wool, to wear evenings. A raincoat is more necessary this time of year than any other. You can get a slicker, a poncho or a regulation raincoat for \$2.60 from the Quartermaster, or you can pay \$50 for an O. D. cravanette mackintosh, belted like a trench coat and lined with leather. There

are many grades between. Have your rank stripes put on the sleeves. Two O. D. blankets will cost \$3.06 each. An extra belt is a convenience. This additional equipment costs \$101.47 minimum and \$208.37 maximum. It can all be bought after reaching camp, either from the Q. M. at the camp exchange or at civilian stores near camp. The assortment, quality and prices will be better than those in the local stores to which the average man will have access at home.

OPTIONAL PURCHASES.

There are many things that are not necessary, that may be bought or not, as desired. These are:

OPTIONAL PURCHASES.

| | Minimum | Maximum |
|--------------------------|----------|----------|
| Mackinaw | \$18 00 | \$25 00 |
| Overcoat | 35 00 | 75 00 |
| Dress Boots | 18 00 | 35 00 |
| Field Boots | 16 00 | 25 00 |
| Rubber Boots (hip) | 3 50 | 12 00 |
| O. D. Wool Uniform | 35 00 | 50 00 |
| Cot | 3 50 | 4 50 |
| Mattress | 3 50 | 10 00 |
| Chair | 1 50 | 4 50 |
| | <hr/> | <hr/> |
| | \$134 00 | \$241 00 |

Mackinaws are short coats originally worn by lumberjacks in the northern woods. They are short overcoats, belted like a Norfolk jacket. They are not regulation but are worn in camp in place of the long, heavy, cumbersome dress overcoat. The regulation overcoat is expensive and seldom worn. It is not worn abroad. Dress boots are calf, Russia or cordovan. Field boots are for rougher wear and lace over the instep or all the way up. Rubber boots are a necessity in camp in the spring. Wool uniforms are all right in winter, but are too heavy at any other time. They are required for foreign service. Whether you bring a cot or not, you will sooner or later want your own. Gold Medal cot is used almost exclusively. The Medical Department special cot made by the

company is higher, wider, stronger and covered with heavier duck than the ordinary cot. One costs \$3.50; the other \$4.50. The larger cot is easily worth the difference in price. Every man will sooner or later want a chair of his own. The Gold Medal chairs are also best. They come in four or five patterns, from \$1.50 for the camp stool, to \$4.50 for a really comfortable folding armchair. Mattresses may be obtained in silk floss, cotton, felt or hair. The minimum cost of these optional luxuries is \$134; maximum, \$241.

OVERSEAS EQUIPMENT.

Overseas service calls for some additional equipment. It includes: Basin canvas; bucket canvas; O. D. wool uniform; compass; cup, field glasses; flashlights; gloves, leather and woolen; folding lantern; trench coat; overshoes; long woolen stockings; folding bathtub. It is not necessary to go into details in overseas equipment. Each man is given ample notice before going abroad and has plenty of time to complete the equipment. All needed articles can be secured at the Depot Q. M., at the port of embarkation. The cost of additional equipment will average about \$100.

Summing up, the expense would be:

TOTAL EXPENSE OF EQUIPMENT.

| | Minimum | Maximum |
|-------------------------------------|----------|----------|
| Cost of Equipment to Report | \$64 87 | \$156 25 |
| Needed for Training Camp | 101 47 | 208 37 |
| Additional Articles which are | | |
| Optional | 134 00 | 241 00 |
| Additional Overseas Equipment .. | 100 00 | 100 00 |
| | <hr/> | <hr/> |
| | \$400 34 | \$705 62 |

This expense, by getting an equipment as needed, can be distributed over two or three months, possibly more. No attempt has been made to attach any value to the articles to be brought from home, as these are already in the possession of most men, and their quality and cost varies with individual taste.

LIVING EXPENSES IN CAMP.

What expenses does one have in camp? Very little, after one's outfit is complete. Mess bills are generally \$1 a day, or \$30 a month. Soap, matches, tobacco, cigars or cigarettes, newspapers, postage stamps, stationery, all depend on individual taste as at home. An occasional trip to town with a dinner and a moving picture show is not very expensive dissipation, especially to those used to city prices. Laundry at the Post Laundry is cheap and generally good. Probably \$50 to \$55 a month would cover all necessary expenses, including mess bills.

Allowance must be made for difference in prices in different localities as well as individual taste. The articles recommended and the prices quoted above are based on nine months' experience in training camp, three as a student officer and six as an instructor. They are not intended to be dogmatic, but merely as suggestive opinions for the guidance and help of those about to enter the service.

THE VOLUNTEER MEDICAL SERVICE CORPS OF THE UNITED STATES.

THE Council of National Defense has authorized the following announcement regarding the work of the Volunteer Medical Service Corps:

Under the reorganization, every legally qualified physician, man or woman, holding the degree of doctor of medicine from a legally chartered medical school, who is not now attached to the Government service, and without reference to age or physical disability, may apply for membership and be admitted if qualified; whereas, the original organization admitted only those who for various reasons were ineligible to membership in the Medical Reserve Corps. The organization will mobilize the medical profession in order to provide for the health needs of the military forces and the civil population, and the recording and classifying of doctors will afford means of obtaining quickly men and women for any service required.

To date about 40,000 of the 144,116 doctors in the United States—not including the more than 5,000 women doctors—either are in Government service or have volunteered their

services. Up to July 12th the Surgeon General had recommended to the Adjutant General 26,733 doctors for commissions in the Medical Reserve Corps. About 9,000 others who applied were rejected. With the 1,194 in the Medical Corps of the National Guard and 1,600 in the Navy, the total—38,527—constitutes 26.73 per cent. of the civilian doctors. Deducting those who declined their commissions or who have been discharged because of subsequent physical disability or other cause, the number actually commissioned in the Medical Reserve Corps stands (August 23rd) at 23,531 with several hundred recommended whose commissions are pending. Of the 23,531 there are 22,232 now on active duty.

The need of using wisely the service of the medical men, in view of the universal war activities, is indicated when it is known that in the five weeks ended August 2nd, there were 2,700 medical officers commissioned in the Army, Navy and Public Health Service—or at the rate of 540 per week. This rate at which enrollment is proceeding is the cumulative result of the operation of all the machinery which has been in process of setting up since the United States entered the world war. While the number commissioned in the five weeks mentioned may seem large, it is not much greater than the rate at which medical men have been receiving their commissions during the past year. There are now 28,674 medical officers commissioned in the three services—26,027 in the Army, 2,427 in the Navy and 220 with the commission of Assistant Surgeon in the United States Public Health Service. Of the 2,700 commissioned in the five weeks ended August 2nd, there were 2,527 in the Army, 169 in the Navy, and 4 in the United States Public Health Service. Also, 40 doctors designated as Acting Assistant Surgeons have been taken on in the Public Health Service in the last two months, 21 for work in extra-cantonment zones, 14 for special venereal disease work, and 5 for marine hospitals. The 26,027 in the Army Medical Service comprise 933 in the Medical Corps, the Regular Army Service; 23,531 in the Medical Reserve Corps; 1,194 in the Medical Corps of the National Guard, and 369 in the Medical Corps of the National Army.

It is estimated that at least 50,000 doctors will be necessary eventually for the Army. It can readily be seen that with the enrollment of these active men, their places in communities and institutions must be cared for and the work,

therefore, throughout the country must be so systematized and co-ordinated that the civilian population may not suffer. An important aspect is the need for medical men in the communities where munitions and other vital war products are being made.

The Volunteer Medical Service Corps, supervised by the Central Governing Board now named, will thoroughly care for these needs.

In connection with the mailing of membership blanks for the Volunteer Medical Service Corps to all legally qualified men and women doctors of the country, Dr. Franklin Martin, Chairman of the General Medical Board of the Council of National Defense, says:

"Great as has been the response to the appeal for doctors, it must be greater. It is imperative that every doctor not already in a Government service fill out, sign and return the blank to the offices of the Central Governing Board, Council of National Defense, Washington, at once. We believe thousands will do this, as they are anxious to be enrolled as volunteers for the Medical Departments of the Army and Navy before registration under the new draft law goes into effect. The appeal for enrollment in the Volunteer Medical Service Corps, which President Wilson has formally approved, is an official governmental call to service. This will place the members of the medical profession of the United States on record as volunteers, available for classification and ready for service when the call comes."

The blank which applicants are asked to fill out reads:

APPLICATION FOR MEMBERSHIP IN THE VOLUNTEER MEDICAL
SERVICE CORPS AUTHORIZED BY COUNCIL OF
NATIONAL DEFENSE.

APPROVED BY THE PRESIDENT OF THE UNITED STATES.

(Spaces for date, full name, street, city and State addresses.)

1. Date of birth.
2. Place of birth.
3. If foreign born, when did you become a resident of the United States?
4. When and where naturalized? How?
5. Are you single, married, widowed, or divorced? Nationality? Color? Height? Weight?

6. State high school, academy, college or university you have attended, with dates of attendance, graduation and degrees received.

7. Give all literary or scientific degrees you have received and names of institutions granting them, with dates.

8. With what languages or branches of science are you familiar?

9. When and where graduated in medicine?

10. When and where licensed to practice medicine?

11. Name principal medical societies of which you are a member. (Do not abbreviate.)

12. What specialty of medicine do you practice?

13. Proportion of time devoted to specialty?

14. Clinical experience in specialty? Institution? No. of years?

15. State all past hospital services. Hospital. Capacity. Date.

16. Present hospital connections. Hospital. Department. Capacity.

17. School and teaching positions occupied in the past. School. Capacity. Date.

18. School and teaching positions now occupied. School. Department. Capacity.

19. State all past experience in industrial or railroad medicine and surgery. Name and address of plant. Type of service (whether medical, surgical, occupational diseases, accident work, contract practice for families of workmen, etc.) Duration of service.

20. State all present connections with industries or railroads. Name and address of plant. Type of service (whether medical, surgical, occupational diseases, accident work, contract practice for families of workmen, etc.) Time devoted to each plant.

21. State military, naval or public health experience you have had.

22. Are you a Federal, State, county or municipal officer? (State exact designation of your office.)

23. Are you engaged in enterprises other than medicine? If so, what?

24. Have you followed any occupation, medical or otherwise, not already noted?

25. Have you previously been an applicant for entry

into the United States Service? Service. When. Where. Result. (If rejected, state why.)

26. I have not applied for appointment in the Medical Reserve Corps of the Army, the Naval Reserve Force, or the Public Health Service owing to—(Check reason.)

- a. Physical disability. (State disability in detail.)
- b. Over age (55.) (State age in years.)
- c. Essential institutional need. Name of institution. Position. Name and address of chief executive.
- d. Essential community need. Approximate population. Number of physicians now practicing in your community.
- e. Essential to Health Department. Name of department. Position. Name and address of chief of department.
- f. Essential to industries. Name of plant. Position. Name and address of chief executive.
- g. Essential to medical school. Name of medical school. Position. Name and address of dean.
- h. Essential to Local or Medical Advisory Boards. Name and address of board. Position.
- i. Dependents. Number of dependents, including self but not employees. What proportion of your income or that of your dependents is derived from sources other than the practice of your profession? Do other persons contribute to the support of your dependents? Have you or your dependents other immediate relatives who could provide support for your dependents?
- j. Sex. (State your sex.)
- k. Religious conviction, not a citizen, or other reasons. (State reason.)

27. Are you available for any of the following services:

- a. Consultant. Medical service. Surgical service. Public Health Service. Special service—What?
- b. Institutional. Laboratory. Administrative. Medical service. Surgical service. Special service—What?
- c. Medical service for industries. Part time. Full time. Own community. Other communities. Kind of work.
- d. Local or Medical Advisory Boards.
- e. Reclamation of registrants rejected for physical unfitness.
- f. Services to needy families and dependents of enlisted men.
- g. Sanitation.
- h. Miscellaneous service.

28. Check the governmental service in which you would prefer to serve, if selected.

- a. Medical Reserve Corps of the Army.
- b. Naval Reserve Force.
- c. Public Health Service.

NOTE.—Wherever practical, your preference will be given consideration. However, the exigencies of war may render it necessary to ask you to do service other than that indicated as your choice.

29. Personal references. (Name three, at least one physician.)

I hereby make application for membership in the Volunteer Medical Service Corps of the United States. I certify that, to the best of my knowledge and belief, the answers to the preceding questions are true and correct in every respect. I pledge myself to abide by the rules and regulations of the Corps; to apply for a commission in the Medical Reserve Corps of the Army, the Naval Reserve Force, or for appointment in the Public Health Service when called upon to do so by the Central Governing Board; and to comply with any request for service made by the Central Governing Board.

(Signature)

(Present postoffice address)

An outline of the purpose and scope of the Volunteer Medical Service Corps, contained in the folder, is as follows:
Volunteer Medical Service Corps organization:

1. Provides means for obtaining quickly men and women for any service required.
2. Furnishes recommendations and necessary credentials to assure the best of medical service both military and civil.
3. Determines beyond question the attitude of the individual toward the war.

OBJECT OF CORPS.

1. Placing on record all medical men and women in the United States.
2. Aiding Army, Navy and Public Health Service in supplying war medical needs.
3. Providing the best civilian medical service possible.
4. Giving recognition to all who record themselves in Army, Navy, Public Health activities, or civilian service.

WORKING PLANS.

All matters pertaining to the organization will be under the direction of a Central Governing Board, authorized by the Council of National Defense and approved by the President of the United States, and its affairs will be conducted from the general headquarters of the Volunteer Medical Service Corps at Washington, D. C., under the Council of National Defense.

OPERATING SYSTEM.

1. Central Governing Board of 25.
2. Forty-nine State executive committees.
3. One representative in each county in every State.

NOTE.—(a) All men to be appointed to State and county committees preferably over 55.

(b) Each State executive committee to consist of five in the smaller States and one additional member in each of the larger States in proportion to each 1,000 medical inhabitants (to be nominated by State committees, Medical Section, Council of National Defense, from among their own members).

(c) Each county of 50,000 population or under should have one representative. All counties having over 50,000 population should have one additional county representative for each 50,000 population or fraction thereof. All county representatives to be nominated by the State executive committee.

DUTIES.

Central Governing Board—To receive and pass upon all appointments.

State Governing Boards—To receive facts from county representatives and make recommendations to Central Governing Board.

County Representatives—To submit facts to State committees according to advice from Central Governing Board or State Executive Committees.

EDITORIAL

THE MOBILIZATION OF THE MEDICAL PROFESSION FOR MILITARY PURPOSES.

THE Medical Section of the Council of National Defense is now engaged in a campaign, the purpose of which is to enroll the entire medical profession of the United States for military purposes. The success of this campaign depends upon the willingness of *every* physician, old or young, to enroll himself in either the Medical Reserve Corps, or the Volunteer Medical Service Corps. Unless *all* physicians are willing to do this it will be impossible to classify the medical men of the country in a way that will be fair to all concerned.

On account of the possibility of some physicians being unwilling to voluntarily enroll in either of the above-mentioned corps, many have been of the opinion that it would have been better for the Government to have passed a law drafting all physicians into the Government service, and classifying them into four groups, in a manner somewhat similar to the classification under the Selective Service Act.

Owing, however, to the patriotic attitude that has been so strongly manifested on the part of the members of the medical profession, the Government has refrained from enacting coercive legislation, and it is now up to the medical men of the United States to show whether a sufficiently large percentage of them are willing to volunteer to perform such services as the properly constituted authorities at Washington deem advisable.

Under the plan of voluntary service that has been formulated by the Council of Defense, physicians may apply for admission to either the Medical Reserve Corps or to the Volunteer Medical Service Corps.

The Medical Reserve Corps is open to registered physicians under 55 years of age. The members of this corps will be given a commission and called upon for active service either at home or abroad. The Surgeon General is desirous of obtaining as many applications for the Medical Reserve Corps as possible, and all physicians whose obligations permit them

to consider immediate active service are urged to make application for this corps at once.

The Volunteer Medical Service Corps is open to physicians of any age or sex who are not attached to Government service. Physicians who become a member of the Volunteer Medical Service Corps will be classified by the Central Governing Board into one of four classes:

Class 1.—To consist of physicians under 55 years of age who are without a disqualifying physical disability and with not more than one dependent in addition to self. Physicians who have an income sufficient for the support of their dependents other than that derived from the practice of their profession will also be placed in class 1. Exceptions to classification in this class will be made in the case of physicians who are essential to communities, to institutions, to health departments, to medical colleges, to industries, to local and medical advisory boards.

All members in Class 1 will be first called upon by the Central Governing Board to apply for commissions in the Medical Reserve Corps of the Army or Navy or for appointment in the public health service, should the need for their services arise.

Class 2.—To consist of physicians under 55 years of age without physical disability that is disqualifying and with not more than three dependents in addition to self. Same exceptions apply as in Class 1. Members of Class 2 will be called upon to apply for commissions in the Medical Reserve Corps of the Army or Navy when members of Class 1 have been exhausted.

Class 3.—To consist of physicians under 55 years of age who are without physical disability that is disqualifying and with more than three dependents in addition to self. The same exceptions apply as in Class 1. Members of Class 3 will be called upon to apply for commissions in the Medical Reserve Corps of the Army and Navy when Class 2 has been exhausted.

Class 4.—To consist of physicians over 55 years of age, all women physicians and all physicians who are rejected from active military service because of physical disability. Physicians in this class will not be called upon for active military service, but will be requested to perform duties in connection

with medical examining boards, departments of health and other branches of civil practice.

From this outline it will be seen that the Voluntary Medical Service Corps has a wide scope and furnishes a sphere of activity for every physician who is willing to assist the Government in this great national crisis.

As Dr. Franklin Martin has well said, "The Volunteer Medical Service Corps is a gentleman's agreement on the part of the civilian doctors of the United States who have not yet been honored by commissions in the Army and Navy, and a representative Board of Governors consisting of officials of the Government assisted by lay members of the profession, in which the civilian physician agrees to offer his services to the Government if asked to do so by the Central Governing Board."

Some physicians seem to be under the impression that the Volunteer Medical Service Corps is an unofficial body. This impression is entirely erroneous, as the organization of the corps and the enrollment of the medical profession of the United States has been authorized by the Surgeon General of the United States Army, by the Surgeon General of the United States Navy, by the Surgeon General of the United States Public Health Service, by Provost Marshal General Crowder, and has been strongly endorsed by President Wilson.

All physicians who desire application blanks for either the Medical Reserve Corps, or for the Volunteer Medical Service Corps may obtain the same by applying to Dr. Charles E. Sawyer, Secretary of the Volunteer Medical Service Corps, Washington, D. C.

G. H. W.

A REVIEW OF FORTY-THREE YEARS OF MEDICAL EDUCATION.

It was in September, 1875, that I was first introduced to a medical college. I had graduated from the Philadelphia Central High School the previous year, and my father decided that I should take up the study of medicine. I had no choice in the matter whatever. Even at that remote period we chose to compliment ourselves concerning the remarkable advancement of the time, and the wonderful progress that had been made in medical education. The medical colleges of the day

(I am speaking of the best of them) were but primitive affairs as compared with those of the Twentieth Century. The faculties were for the most part self-perpetuating bodies. It can hardly be said that vacancies were filled always with a desire to put the best man in the place. Good men were selected it is true, but personal friendships oftentimes had considerable to do in favor of the man who was fortunate enough to secure the blue ribbon of the college professor. The faculties also were decidedly limited as to number. The majority of medical colleges had but seven professors and these presided over the fundamental branches, anatomy, physiology, chemistry, materia medica, pathology and practice of medicine, surgery and obstetrics. Practical instruction received some slight recognition in that there were demonstrators of anatomy and surgery. The most progressive colleges prided themselves on the possession of demonstrators of obstetrics and chemistry also. There was a growing disposition manifested to enlarge or broaden the curriculum, in response to which demands, chairs of gynecology and ophthalmology were instituted.

The curriculum was likewise primitive. College opened early in October and closed the latter part of February, lectures being continued for a period of just five months. From the hours of 10 A. M. to 2 P. M. and 4 P. M. to 6 P. M. the students listened to lectures. As all courses were repeated, the entire student body attended all the lectures. As a matter of fact it could not be otherwise, for most colleges possessed but two lecture rooms. From 9 to 10 in the morning, the students held quizzes under faculty supervision. From 1 to 2 we had the only clinical teaching then available, and these covered the subjects of diseases of the eye and ear, general medicine, general surgery and gynecology. Between 3 and 4 in the afternoon, the students were quizzed by quaesitors elected by themselves. From 8 to 10 in the evenings, Saturdays excepted, work was done in the various so-called practical rooms devoted to dissection, bandaging, operative surgery and practical obstetrics.

The demonstrators were paid moderate salaries—very moderate indeed. At the end of the year, the faculty had a financial review of the season, paid all bills to date, and divided the balance among themselves. In other words, they were all “jack-pot” colleges. The greater the number of students, the

greater the "divvy." Economy in the matter of expenditures was wealth—to the faculty.

Two years of this intensive teaching was regarded as sufficient to manufacture a doctor. We called it two years; in reality it was but seventeen months, as students registering in October, 1875, were graduated in March, 1877.

The folly of it all was evident to the progressive institutions, and to those who had ambition to excel. Already in 1875 there had been instituted the so-called graded course. All colleges running this course were proud of it; but viewed from present day standards, it were better named "instalment course." Students taking it were booked for three years. During the first year, they attended only the lectures on anatomy, physiology and chemistry, and did dissecting and chemical laboratory work. In their second year, they attended all lectures, and on the completion of the year, underwent their examinations in anatomy, physiology and chemistry. In their third year, they attended lectures on surgery, general medicine, obstetrics, ophthalmology, etc., materia medica, and gynecology. They also worked in the rooms devoted to practical surgery and obstetrics under the supervision of the respective demonstrators.

The student body was very different from that of the present day; they were good men; but they were different, very much so. I well recall my first hour at medical college and the impressions I obtained therefrom. As I looked around, there was scarcely a young looking man in the place. At least that is what I thought. But appearances were deceitful, just as much so in 1875 as they are today. The ages which students admitted to each other were far greater than those on the registration books. I well recall one youth who sported a beard some eight or ten inches in length. He was venerable enough in appearance to be a grandfather. In reality, he was but 21. The majority of students were of more tender years than those of 1918; but recognizing the crime of being a young man, they did their best so far as the camouflage of the period (in those days we called it bluff) would give, and they made themselves look old by wearing beards, and sporting the dress and mannerisms of their fathers. The majority of these young men had just come from schools, seldom, however, more advanced than the high school; and many of them had but passed through the grammar grades. Occasionally we glorified

in the possession of a full fledged college A.B. To give themselves added dignity, it was not unusual for them to carry their "camouflage" to the superlative, by addressing each other as doctor.

A very large proportion of them were obliged to earn a living. This was generally accomplished during the seven months intervening between courses. Those who depended upon "Dad" were far fewer than at the present day. Some were men who had been following a definite occupation, which they were using only as a means to the end, the end being the possession of a medical diploma. Some had been so long away from the school as to give evidences of but a rudimentary education. Others had been serious minded throughout life, and although of well advanced maturity had maintained systematic reading habits, and vied with the college graduates in literary attainments. With but few exceptions, they were enthusiastic. There was very little cutting of lectures, and scarcely any lateness at the first hour of the day; and yet attendance was not compulsory as it is at present. About three-fourths of the students were present at "quizzes," although attendance was not compulsory under the rules of the college. Some students were candid enough to say they got more out of the quizzes than they did out of the lectures.

From the beginning of their medical lives, students were hypnotized by their own self-deceptions. Within thirty days after entering college, they imagined themselves to be doctors, and oftentimes were accepted by the public at their own valuation. It was not unusual for first-year students to possess the wonderful equipment of a pocket medicine case and a small set of surgical instruments with the aid of which they did some practice on an innocent and altogether too confiding community. There were no laws governing the practice of medicine at that time, and any one could hang out a "shingle," style himself a "doctor" and do his best. Hence some of the students did eke out some sort of an existence as practitioners, and practically all of them had "cases." Those of considerable initiative, had a good nucleus for a practice on graduation.

To recall the conditions of forty-three years ago sounds to us of 1918 methods as a travesty. To-day we look back with horror on the methods of half a century ago. And yet it was the method under which nearly all of us who have passed the sixtieth milestone of life were educated. It was

the method which educated the Grosses, the DaCostas, the Agnews, the Guernseys, the Thomases, the Farringtons, who are dead; as well as of the many shining lights of the twentieth century still living, active and progressive. We may smile at the educational methods of the past, and we have no wish to return to them; but 1918 can produce no better men than those I have mentioned. Indeed, it is just the men of this class who made the progress, broke down old and effete systems, and established medicine of the twentieth century on a sound basis. Knowing the difficulties under which they labored, they have striven to secure better instruction for their progeny. Good men exist at every period of the world and in all walks of life. They rise above conditions and environment, and forge to the top. It is "stuff" in a man that counts after all. Still we must not forget that these self-same men would have been better doctors if they had had 1918 opportunities. Their regrets concerning the poor opportunities of their student days are largely responsible for the greatly improved educational conditions of the present time. As I look over the old roster, I find thereon enrolled the names of men who are now prominent as teachers in Boston, New York, Baltimore, Philadelphia, Cleveland, Chicago, Minneapolis, St. Louis and San Francisco, all of them enthusiastic and uncompromising advocates of advanced methods.

Under a system thus fostered medical colleges were organized in number far greater than was necessary for the demands of the community at large. On the other hand they were far too few to satisfy the craving of doctors for professorships. This perhaps constituted the greatest evil of the system, for students were unable to decide for themselves and depended upon the advice of medical acquaintances who were by no means disinterested parties.

The training of medical teachers was still another evil. Some would make it the greatest one. However, it existed. Men were brought directly from general practice to the lecture room and given full faculty membership with no other reputation than that of being good practitioners, and oftentimes without the slightest acquaintance with teaching and with but little knowledge of the natural history of that interesting species of humanityyclept the medical student. That medical teachers should be so chosen to-day is the opinion of many physicians; that the finished teacher is a process of evolution or

training is not sufficiently appreciated. It has been said that everything is from the point of view. But man long absent from the halls of medical lore well remembers his highly respected professor, who was an excellent physician and reliable consultant; who read his lectures from manuscript oft-times in a style that would not have given an eighth grade school boy a passing average.

Between the methods of the early seventies and those of 1918 there is a remarkable difference, the changes from year to year being slight but the extremes of the long period being so great that but little similarity can be found in either students, colleges, teachers, or curriculum. The greatest changes were those instituted about twelve years ago with the demands for pre-medical education or insistence upon certain qualifications for admission to medical colleges.

To-day, the situation may be epitomized as follows: The entrance requirements for medical students demand at least two years' study in an accredited literary or scientific college; the medical course proper extends over a period of four calendar years with a minimum of thirty-two weeks' actual college attendance in each year; properly equipped laboratories and hospitals in conjunction with the college; one year's internship in an accredited hospital following the granting of the college diploma; a teaching staff of anywhere from sixty to one hundred of whom eight or more are so-called "all-time men," and devote their entire attention to medical instruction.

Under such a system, medical students have greatly diminished in number, and more than half of the medical colleges of the country have closed their doors. The existence of the small institutions having no connection with the great universities is threatened. Indeed, it is openly stated by some of the advocates of advanced medical education that such a consummation is to be devoutly wished.

Medical education has become an expensive matter, so expensive in fact that it is absolutely impossible to exact proper fees from the beneficiaries, *i. e.*, the medical students, commensurate with the outlay demanded for their proper training.

The present situation may now be considered from the standpoint of the students, the teachers, and the finished

product of course making comparison with similar classes of fifty years ago.

Of these young men while at college we may say of them as compared with the past, that they are better educated, more cultured, better able to acquire the rudiments of medicine, but unfortunately, they are far more academic than practical at the time of graduation. Morally and ethically they are far above the standards of the medical students of the past. This is not intended to reflect upon the older men, but the old system permitted of the admission to colleges of numerous students who for years had not been under restraint or discipline. These particular individuals became prominent largely because they were notable exceptions, but nevertheless they tended to give a bad name to the medical student body as a whole. Such a class appears to have been entirely eliminated. In its place there has been created a body of young men oblivious of serious responsibility in the matter of earning a living. This we believe is not their fault, but rather that of a system which has taught them to depend upon parents or family and the generosity of education's patrons.

As practitioners they start with one serious handicap, namely, they are so firmly impressed with the diagnostic value of modern scientific advances that they are sadly neglectful of the purely bedside and clinical aspects of disease. Not that we would ignore for one second the value of the various serological reactions and laboratory methods and the X-ray in diagnosis, but we do feel that the younger men should cultivate their powers of observation and their abilities as investigators while not ignoring the modern and more accurate methods of studying diseased conditions.

When such young men get out in the world to minister to the sick, doubtless this unwarranted pedantry will disappear as they become more practical, and come to understand the relative position or value of laboratory, X-ray, and other modern diagnostic methods; at the same time they must necessarily cultivate clinical sense.

We have heard various expressions of opinion concerning these young men. One eminent teacher, an ardent advocate of modern methods, declared that at the age of thirty-one years they were inferior as practitioners to the men of corresponding years graduated twenty-five years ago. What they would be at forty-one years, he was not prepared to say. A

trustee of a university declared to us that we are educating teachers and research workers and not medical practitioners. The practitioners of older days regard them with envy, as they bemoan their own limitations in modern methods of clinical investigation. One prominent and experienced physician of our acquaintance has made it a rule to keep one of them in his office as an assistant for no other reason than it affords him an opportunity for keeping abreast of the times, or as he himself expressed it, "taking a post-graduate course without leaving the business."

As hospital internes, we have found them of increasing efficiency year after year.

As business men, they are inclined to look more after the dollar than did the older men. This characteristic is born of environment or necessity. They have been so long dependent that financial stress demands quick returns. As a result, we feel that their present necessities stand in the way of ultimate or maximum success. Assistantships, etc., in offices of practitioners or specialists are accepted, and too often there they remain for years as mediocre factors, hoping against hope Micawber like, for some sudden change which may bring a degree of prosperity commensurate with their abilities. Too few enter practice in rural communities where fees are small and do not warrant the outlay for adequate medical equipment. Referring to an opportunity to practice in one of these rural towns a young man remarked to us: "I would rather be a lamp post in Philadelphia than a prosperous physician in _____."

Teachers have increased of late years to a wonderful extent. Every possible specialty is represented on the college staff. As time goes on we find specialties developing within specialties, and the end does not appear to be in sight. For example, there is an influential group of enthusiasts advocating special professorships of syphilis and tuberculosis to be entirely independent of the great departments of medicine and general surgery, and there are some who are strenuous for having our men graduated as efficient insurance examiners, health officers, etc., etc.

Individually the teaching specialists are men of ability, and have developed a high degree of knowledge and technical skill in the practice of their professions and of imparting their knowledge to others. As time goes on they become more and

more highly specialized in their own fields and less conversant with that which is transpiring in other branches of medical science. After about a dozen years or thereabouts, the oculist or the genito-urinary specialist for example admits openly that he is about as little qualified to express an opinion on a problem of internal medicine or in fact of any branch not related to his own, as is a professor of Greek to do the same concerning a simple every day arithmetic problem. Quite naturally—indeed, we think it is praiseworthy—each teacher looks upon his own branch as *the* one of the entire curriculum which is an absolute necessity to the medical student. As a further result, the poor student is forced into an impossible situation. It is demanded of him that he shall know not only that which the various professors and specialists know as individuals, but that he shall know the sum total of what all of these gentlemen know collectively. Can anything be more unreasonable? Some students because of unusual industry or natural gifts succeed in making an excellent showing in all branches, but that they are able to apply the knowledge they have gained is doubtful with a few notable exceptions. And then after one year's service in an accredited hospital and have forgotten quite a little of their theoretical learning, they appear before a Board of Licensure, said board consisting usually of less than ten examiners, and the poor applicant or shall we say suppliant tells what he learned from his eighty or more teachers at college.

And as of old, and as it ever will be, the results, by which we mean the finished product, the young doctors, are measured not by the teachers, the college, the State Boards of Licensure, but by the raw material given us, namely, the young man. One of the most eminent pathologists of the day is a product of the old system; and worse than that he is a graduate of a medical college that never attained the distinction of a high academic rating, all of which goes to prove that it is the "stuff" in a man that counts. Of course, we are all free to admit that the better the system by which the men are handled, the better are the results.

Our objections to present conditions relate entirely to the age at which young men enter upon the practice of medicine. The average age at graduation from the high schools in the United States is nineteen years. After two years at an academic institution or college, the student is twenty-one

years old. There is an average gap of one year between leaving college and entering a medical school. The medical course covers four years, and with one year in an accredited hospital, the young man is twenty-seven years of age when he first essays to cure the public of its ills and thereby make a living. He is not likely to be able to support a family until he is thirty-one years of age. Such a late age for assuming parental responsibilities is contrary to public welfare. Many of the great medical men of to-day were world-famous at thirty-two. Is it any wonder that even those who have a fascinating interest in medicine refuse to take it up as a life calling or career?

Much as we deplore the present state of affairs, we would not for one minute go back to old conditions. The proper understanding of the medical sciences demands an amount of pre-medical knowledge fully up to the requirements of the laws. But we feel that the time for acquiring that pre-medical lore is unnecessarily long, and that authorities are unreasonable in prescribing the conditions under which it is to be acquired. Present methods may stand if so desired; but in addition, students should be given the privilege of appearing before an authoritative board, which shall decide by examination or otherwise, whether or not the applicant is suited academically or mentally to enter a medical college. Such a board will not be too friendly, and it is not likely to give the desired permit unless the qualifications exist. By such a system, it is possible to save students one or more years. Personally, we believe that if systematically carried out, the average age of the newly fledged doctor may be reduced to twenty-four years, which is not unreasonable in view of the responsibilities he must assume, and the immensities of his branches of study.

We would furthermore remove from the premedical requirements the text-book knowledge of a modern language. As our periodical literature exists to-day, there appears to be but little necessity for reading articles in their original tongue, as everything of importance is excerpted with skill and judgment, and appears in English usually within thirty days of its publication on the other side of the ocean.

We would recommend to students that they acquire a working knowledge of shorthand, sufficient in fact to write 75 to 100 words per minute, and that students keep up this knowledge by practical work throughout their college life. In

after years, they will find this accomplishment to be of unlimited value in record or history taking, as well as in literary or research work.

Eliminating the mature age of medical students, we have naught but praise for our colleges and their students. We wish that present-day opportunities had been ours in 1875 and the four following years.

BARTLETT.

Post Scriptum.—Ofttimes it has been said that the postscript of a letter contains its most important information. Perhaps the reader will find it to be the case in this instance. Since the above was written, information has come to hand to the effect that the War Department has taken over a large proportion of the medical colleges of the country, and that for the present at least, medical students and their education become a part of the war machine. The completeness with which the move has been consummated is attested by the fact that medical students are enrolled as privates in the army, wear the United States uniform, sleep in barracks, eat in mess rooms, have their tuition paid by the Government, and receive the regular soldier's pay of \$30.00 per month. Numerous other details enter into the plan, but the above is sufficient to tell us that we are on the eve of radical changes in medical education. Truly, the present is a doctor's war to the extent that the efficiency of medical and surgical service is an important factor in the conservation of our military and naval and national resources.

Much more is to come, beyond doubt. Industrial medicine and surgery have lately taken immense strides in both theory and practice. Doctors must be educated in more things than the pill, powder and knife.

GLEANINGS

OCCULT HEMORRHAGE.—Gregersen has simplified the test for occult bleeding in the stools. All that is necessary for it is a scrap of stool, so small that it can be carried between two slides, and the reagent, made up in powder form. It merely requires dissolving when ready to use, and is dropped directly on the fecal substance. The work issues from the medical service of the public hospital at Copenhagen, and states, to begin with, that the feces of normal persons, even on a meat-free diet, contain a certain proportion of blood (according to his data, from about 0.03 to 0.005 per cent.). Hence the phenolphthalein and thymolphthalein tests are not suitable as they give positive findings with extremely minute admixtures of blood. The sensitiveness of the benzidin test can be controlled by the strength of the solution. He uses a powder consisting of 2.5 cg. benzidin and 20 cg. barium peroxid. These powders keep well in waxed papers. When ready to use, one of the powders is poured into a measuring glass, and on top of this is poured 5 c.c. of a 50 per cent. solution of acetic acid. We thus obtain a 0.5 per cent. solution of benzidin in which the necessary proportion of hydrogen peroxid is generated as the barium peroxid is dissolved by the acetic acid solution. The latter solution also keeps well. The scrap of feces, about the size of a hemp seed, taken from the center of the lump, is spread in a thin layer on a slide, and from 2 to 4 drops of this reagent are dropped on it. If the specimen turns a greenish blue, a pale blue, in the course of from fifteen to sixty seconds, the specimen contains blood in a proportion of about 0.2 to 1 per cent. If the tint is a livelier blue and the change in tint occurs in from three to fifteen seconds, the blood content of the specimen is about 1 to 5 per cent. With a still more rapid change of tint and a darker blue, the blood content is over 5 per cent. Two or 3 drops of the reagent are required for 1 drop of urine. He has found persistent occult bleeding one of the very earliest symptoms of cancer. With gastric ulcer, the bleeding comes and goes, but never keeps up long. Negative findings for a few days disprove the assumption of cancer. Gregersen has found it convenient to prepare some filter paper by dipping it in a very dilute solution of acetic acid with minute blood admixture. The dried paper does not show the presence of blood, but if a drop of the benzidin reagent is dropped on it, the characteristic greenish blue tint appears at once. This is a convenient test to show that the reagent is properly made.—*Jour. A. M. A.*

A RAPID TEST FOR OCCULT BLOOD.—The *Medical Record* asserts that all gastrointestinal cases, as well as cancer suspects, should have stool examinations. The examination for occult blood, for example, although probably not familiar offhand to the average practitioner, may be very useful in detecting early carcinoma, ulcer, or intestinal parasites. Barker states that as much as 5 per cent. of occult blood may be present without being recognized by the naked eye.

The first thing we think of is the guaiac test, but Vaughan calls attention

to the advantages of the benzidin test, which is generally considered too delicate for clinical use. He uses Wagner's "dry test," which consists in adding a few drops of mixture of a knife-point of powdered benzidin (an amount the size of a match head), 2 cc. of glacial acetic acid, and 20 drops of a 3-per-cent. solution of hydrogen peroxide to a little solid feces on a clean glass slide; a greenish-blue fading color is positive. The material for a slight variation of this test may now be obtained in very convenient form for the practicing physician. After exhaustive experience with this test, Dr. Vaughan concludes that it is the most reliable, as well as the most simple, rapid, and clean. It is not, he thinks, too delicate for clinical use. A negative result is more reliable evidence of the absence of blood than a negative guaiac test. Meat fibers, pus, and the usual drugs and food do not vitiate this test, and rare meat does so only if it has been taken in considerable quantity.

HEART MURMURS IN CANDIDATES FOR MILITARY SERVICE.—Barker's experience at a Medical Advisory Board during the past three months, where with others he has examined the hearts of 2,500 drafted men between the ages of 21 and 31, indicates: 1. That many organic murmurs (diastolic murmur of aortic insufficiency, presystolic murmur and snapping first sound of mitral stenosis) are often entirely overlooked by examiners in local boards, for they are not infrequently detected in men referred to the Advisory Board for defects other than those of the cardiovascular system. 2. That many extracardiac (cardiorespiratory) murmurs, and accidental intracardiac murmurs, are suspected by medical examiners to be murmurs of serious import. 3. That the hearts of some of the men presenting organic murmurs are better prepared to stand exertion than are the hearts of some men presenting no murmurs. 4. That good response to the exercise test by no means rules out the existence of organic disease of the valves of the heart. 5. That many men with organic disease of the valves of the heart need not be unconditionally rejected, though according to present regulations they must be, for many of them are entirely capable of undertaking special service not involving severe exertion, and some of them could, without harm, even be given duties requiring considerable bodily exertion. Experience in the armies in Europe would indicate that mild stenotic lesions stand strain better than lesions causing valvular insufficiency. The lesions of "barrage" are less serious than the lesions of "fuite." That, on the whole, while the study of cardiac murmurs is of great importance in estimating the fitness of a candidate for military service, still greater importance attaches to the study of the condition of the cardiac muscle and to the estimation of its ability to bear strain.—*Canadian Med. Journal*.

VARICOCELE AND ITS RELATION TO THE REGISTRANT'S ACCEPTANCE FOR MILITARY DUTY.—The *Indianapolis Medical Journal* for May, 1918, in a leading article quotes as follows from Bloodgood:

"We were set right in this matter after examining 4314 young men seeking employment as brakemen, firemen, switchmen, and others engaged in equally strenuous labor. In this number, 4314, we found 315 with varicocele in more or less marked degree, most of them such as we had operated on earlier. These men were between twenty and thirty years of age. A few wore suspensory bandages less because these were necessary than from the thought that they ought to wear them. As varicocele did not disqualify for railway service, none were operated on, or asked for or were advised to have an operation. These observations covered a period of twenty years, and not

in a single instance have we found a disability arising from the presence of the varicocele or a suggestion for an operation. Within the last few months we have examined about five hundred young men for selective military service, and found the percentage of varicocele about the same as above stated. Therefore in 4800 men between the ages of twenty and thirty-one, with 350 cases of varicocele, we have not found one man who apparently needed an operation. On the contrary we have examined a considerable number of young men who had been operated on by more enterprising surgeons—a few of whom we had earlier contributed—with results far less satisfactory than where we had let them alone, observing a course which relieved them of their fear.”

CERVICAL GLANDULAR ENLARGEMENT IN CHILDREN, AS EVIDENCE OF INFECTION.—Gunson, in *The British Journal of Children's Diseases*, reaches these conclusions:

1. Glandular enlargement is evidence of an infective process situated in the lymphoid tissue specifically drained by such glands. The flow of the lymph from the infected tissue is in one direction only, and each gland drains a definite and restricted area, the tonsillar lymphatics, e. g., passing directly to the tonsillar gland.

2. In the majority of cases of chronic cervical glandular enlargement the associated infection is simple in nature and quickly responds to appropriate treatment, the glandular enlargement subsiding as soon as the infective process is removed. Fourteen per cent. of scarlet fever patients, however, on discharge from hospital presented evidence of persistent throat infection (evidenced by glandular enlargement) in spite of energetic treatment.

3. Persistent cervical glandular enlargement in the course of scarlet fever was found to be associated with severe constitutional symptoms, and complications which included nephritis and arthritis.

4. When chronic cervical glandular enlargement persists in spite of local treatment of the throat, the lymphoid tissue involved (e. g., tonsils) is frequently the seat of a tuberculous lesion, the glands being secondarily infected.

5. Simple chronic glandular enlargement in young children is associated with malnutrition, and alimentary and respiratory disorders. When the glandular enlargement persists into adolescence, or develops, these patients suffer from apathy, exhaustion, and dyspnea on slight exertion. The symptoms are sufficiently severe to suggest cardiac disease, which careful examination fails to reveal. This association is so important that it indicates early and complete treatment—directed to the infective focus—in all cases of cervical glandular enlargement, including operative measures when required.

THE TREATMENT OF ADVANCED PROSTATICS.—Crockett (*Urologic and Cutaneous Review*), states that the patient who has sudden retention should have a nurse for the first twenty-four or forty-eight hours. The bladder should never be emptied suddenly. Every two or four hours a small quantity is withdrawn, preferably two to four ounces. Later, if it is found that the kidney secretion replaces the amount withdrawn, the quantity can be increased to six or eight ounces; water should be freely given. The alimentary tract should receive attention, mineral oil being given in a routine way, coupled with arsenic and iron when the hemoglobin is low. The two stage

operation should be performed. The second stage should be performed when the kidney sufficiency increases; when pressure effects on the deep abdominal vessels and lower bowel disappear; digestion, respiration, and heart action improved and when the prostate can be felt to have shrunk to about half its size.

THE RENAL FUNCTION IN CARDIAC INSUFFICIENCY.—Achard and Leblanc (*Presse Medicale*), note that in cases of heart disease with diminished output of urine, urea often tends to accumulate in the blood, lessening, however, when diuresis is started. Ainbard has ascribed the urea accumulation directly to the reduced output of urine; the kidneys are held still capable of concentrating urea without difficulty, but the outflow of fluid is insufficient. They have found that so simple an explanation of the condition does not always answer, for upon fractionating the urine one sees at short intervals the urea being eliminated in very different degrees of concentration, the latter increasing progressively as the output of urine rises and the degree of albuminuria falls. These facts can be explained on the basis of variations in the circulation of blood through the kidneys; stasis, when it becomes accentuated, temporarily lowers the power of the kidneys to concentrate urea. After the onset of polyuria, on the other hand, one can observe an increase of the concentrating power to above normal. Similar observations may be made in acute diseases.—*Charlotte Med. Jour.*

MEDICAL TREATMENT OF GASTRIC AND DUODENAL ULCER.—Alexander G. Brown, Jr. (*Charlotte Medical Journal*, June, 1918) considers the first step the search and removal of the primary focus. The mouth accessory sinuses, teeth, alveoli, salivary glands may be the primary focus. A careful study of the blood should be made: Wassermann, the search for malarial parasites, coagulation time, etc. A study of the feces should also be made and a careful urinalysis is of great importance. It is a good plan to begin treatment by fasting one or two days. This should, of course, be done in a hospital. Following the period of fasting, milk and eggs are administered; later, sugar, fats, and proteids are added. An alkali should be administered to reduce the hyperacidity. Sodium bicarbonate should always be administered with another alkali, as when administered alone it may increase the sodium chloride from which the hydrochloric acid is increased, rather than diminished. Bismuth subnitrate is of great value. Two drams of bismuth in eight ounces of distilled water—of which a tablespoonful is given three times daily—is of value. Nitrate of silver, with extract of hyoseyamus and extract of belladonna should be given before meals to stimulate healing and allay spasm. If pylorospasm is present, hypodermic of atropine sulphate, grain 1-120 to 1-60, is administered once or twice in twenty-four hours. The Einhorn method of duodenal feeding should be used whenever possible.

THE PRINCIPLES OF TREATMENT IN MERCURIC CHLORIDE POISONING.—In the *Journal of the American Medical Association* of March 23, 1918, Sansum records a study made upon dogs and reaches these conclusions:

1. There is no sound experimental basis for the belief that the promotion of free diuresis contributes materially to the chances of recovery in mercuric chloride poisoning, and this phase of treatment should not be permitted to obscure that which is more essential.

2. Combined treatments which involve sweating, diuresis, and in-

creased elimination from the bowel probably owe their value chiefly to the latter effort.

3. It would appear in the light of the present study that when 4 mg. or more of mercuric chloride per kilogramme of body weight has entered the tissues at large, death regularly occurs, and that we have no adequate grounds for believing that death is preventable by any known form of treatment. Whereas subsequent studies may add to our knowledge, it would appear that persons who have recovered from mercuric chloride poisoning owe their lives to the fact that a lethal dose has never gained access to the extraportal circulation. Practical therapeutic efforts should be directed frankly toward the accomplishment of two things: (1) Mechanical removal of the poison from the lumen of the alimentary tract. (2) Antidoting the poison before it leaves the portal circulation—that is, particularly before absorption.

INFECTIOUS ENDOCARDITIS.—At a meeting of a French medical society (*Paris Medical*), the heart of a soldier was demonstrated, who had died thirty days after the onset of an infectious endocarditis simulating typhoid fever, but, which had, at first, presented transitory symptoms of meningeal disturbance. A marked diastolic murmur had made it possible to diagnose its localization at the aortic orifice, the right valve of which, perforated at the base, was transformed into a vegetative mass as large as an almond. There was splenic infection and hepatization of the lower lobe of the right lung; and, toward the end of the malady, serofibrinous pericarditis had set in, as well as hemorrhagic pancreatitis. Smears and sections of the endocardial vegetations disclosed the presence of cocci. Cultures made of blood removed previous to autopsy, in spleen tissue and in blood serum, showed pure cultures of streptococci.—*Charlotte Med. Jour.*

RADIUM TREATMENT OF SCARS.—Stevenson (*Lancet*, March 23, 1918), as the result of a clinical trial thus concludes regarding radium:

Radium has a distinct sphere of usefulness in the treatment of scar tissue and fibrous adhesions.

It is a valuable adjunct to other methods of orthopedic treatment, especially by shortening their duration.

Its effect is rapid, sometimes immediate.

It softens and mobilizes scar tissue.

It appears to facilitate subsequent removal of the scar by the knife.

It enables structures, like tendons adherent to the scar, to free themselves.

By loosening tendons and stiff joints it improves the functional power of the part.

It possesses the advantage of acting, to some extent, as an innocuous local anesthetic for about a week.

It is particularly useful in treating scars and adhesions in the hands and fingers.

It is easily applied to the surface of the skin, and by this method causes no inconvenience to the patient.

To obtain the best results a single large dose is necessary.

The dose should not be so great as to produce inflammation of the skin.

With suitable dosage it appears to produce no ill effects.

In small doses it appears to hasten the healing of wounds, and to allay the painful inhibitory effects of the products of inflammation.

IS THE MODERN TREATMENT OF SYPHILIS A SUCCESS?—Most physicians who have been in practice twenty years or more can recall cases of syphilis treated with mercury and iodine via the alimentary canal for the then recognized period of two to three years, and today can place the patients, having had them under observation for that length of time, or being aware of their presence in the community, and can say that they have evidenced no outward or inward signs or symptoms of the disease. They can even recall sporadic cases where the disease has appeared twice in the same patient, thus evidencing a cure for the first outbreak. Furthermore, they can bring to mind cases which have been quite thoroughly treated, but which, ten or more years later, have presented manifestations which point all too clearly to the activating syphilitic poison. Whether cases were completely cured or not, it is certain that the disease remained quiescent and did not give the patient any further trouble, often through a long life.

Today the former treatment has given way to intravenous injections of one of the arsenical compounds, supplemented by the former treatment, or at least by hypodermic injections of some mercurial compound. Can the results achieved by this form of treatment be termed successful? Are we any better off with it than with the older treatment? And which is the remedy, the arsenical compound, or the mercury?

If the results achieved at the Toronto General Hospital can be taken as a criterion and on a par with those achieved in other similar institutions, the majority of physicians can hold to no other opinion than that the treatment is neither satisfactory nor encouraging, even though the writer we shall presently quote states: "Considering the class of cases that have been dealt with at our clinic, the results of treatment are not at all discouraging." This is an opinion of very doubtful value.

In the July issue of the *Canadian Medical Association Journal*, Dr. W. T. Williams outlines the method of treatment and the results obtained in five hundred cases. Of these five hundred cases, 145, or twenty-nine per cent., were at an early stage of the disease; 355, or seventy-one per cent., were at later stages. On an average of seven and a half doses of 0.5 gram plus four and a half intramuscular injections of mercury, negative Wassermanns were secured in only seventy cases, approximately fifteen per cent. Of these seventy cases, twenty-three were in early stages of syphilis, and forty-seven in the later stages. "Practically all of the late cases were given in addition mixed treatment of mercury and potassium iodide." Very important, too, is this sentence: "Twenty-four cases had a return to positive Wassermann, thirty-five still remain negative, while eleven of them passed from our control"—a not uncommon sequence to the treatment of such cases. That is to say, of the series of five hundred cases treated, thirty-five cases, seven per cent., may be said to be cured, that is, so far as a Wassermann negation indicates a cure. The number is very, very small, and instead of being problematically "not discouraging," is, to say the least, entirely so.—*New York Medical Journal*.

TREATMENT OF ORAL SEPSIS.—In the *British Medical Journal* of March 9, 1918, Fischer says that in his opinion the original focus of severe types of oral sepsis is at the margin of the gums and teeth. Mastication forces food in between the teeth, and between the gums and teeth. This food sets up a certain amount of irritation, and forms a suitable nidus for various organisms. The first problem is how to prevent food lodging in these sites; this can

be solved only by efficient cleansing with a brush, which must be fairly stiff, and used after each meal in conjunction with a powder. Fischer has found the following excellent: *Magnesii carbonas ponderosus*, 3 parts; sulphur sublimat., *sapo Castil.*, aa 1 part; *ol. menth. pip.*, q. s.

If gingivitis or pyorrhea has already commenced, the affected area should be firmly swabbed with a small tightly rolled pledget of wool held in a pincette and dipped in liq. cresol saponis or any of its substitutes, taking care to remove the excess before using. A tumbler of warm water and spittoon should be ready to use immediately after. A thymol mouth-wash should be prescribed. This method, Fischer ventures to predict, will come as a revelation to all who have labored for weeks and months with iodine, hydrogen peroxide, and other methods, as it is so rapid in its effects; only in very advanced cases has Fischer found it necessary to apply the liq. cresol saponis twice, and rarely three times, at two-day intervals.

In severe cases of pyorrhea there is a dirty grayish-brown sloughing appearance at the gum margins, often jumping to the adjacent buccal mucous membrane; all these sites should be firmly swabbed, although the surfaces bleed in the process. A similar condition is sometimes seen on the surface of the tonsils, and should be treated in a similar way; a sponge on a holder may be necessary here, dipped in sterile water or any mild antiseptic, if the person is too young or unable from any other reason to gargle. In septic conditions of tonsils and the back of the throat the ordinary chlorine gargle or swab should be applied every three hours after the initial swab with liq. cresol saponis.

A very septic socket may develop after extraction of a tooth, causing days and sometimes weeks of pain; if a swab soaked in liq. cresol saponis is firmly pushed into the socket, the relief is almost instantaneous, and a second swabbing after twenty-four or forty-eight hours is rarely necessary. The pain inflicted in swabbing gums is practically negligible, but may be rather severe in the case of sockets.

SELECTION OF ABDOMINAL CASES FOR OPERATION.—Richards (*British Medical Journal*), says that in military wounds of the abdomen the value of early operation and the best technic are fairly well agreed upon, and the mortality is fairly constant. There is, however, a material difference between successful cases and profitable cases. The only profitable cases are those in which an otherwise fatal injury is cured by operation, and it is upon the proper selection of cases for operation that the proportion of profitable cases depends. Even if the operation does no harm, it is a waste of valuable time to operate upon cases which would recover equally well without operation, and it is a similar waste of time to operate upon such as offer no hope of recovery even after operation. In both instances we are depriving other men of profitable operations. Patients with wounds limited to solid viscera, with no progressive hemorrhage and no large retained missile, seldom need operation, and those with other grave injuries of head, chest or extremities are usually not fit to withstand operation. In the others it can usually be determined that the abdomen has been penetrated, but the nature and extent of the abdominal injury remains unknown; hence the decision regarding operation must be based upon those facts which can be determined. While no rule can be laid down with certainty, the proportion of profitable operations is very high in those operated upon within the first twelve hours; the same is true to a less extent for those treated in the first twenty-four hours,

but after this interval the proportion is very small, since most who then survive would have lived without operation. The pulse rate is the second guide of value, for those with a pulse of 120 or more have less than half the chance of survival of operation of those with pulse below that rate. Those with rapid pulse should be operated upon, however, if their condition is as good as it is likely to be, if they have a chance of recovery, and if the time taken does not prevent the proper treatment of more hopeful cases. In times of great pressure the men should be selected and arranged in the order of the likelihood of the operation's being profitable, if the maximum surgical help is to be given to all. Finally no surgeon should be allowed to do this work who is not rapid and gentle in this technic.

TREATMENT OF WARTS.—Montgomery (*California State Journal of Medicine*, Vol. XVI, No. 5) aptly observes that verruca may give rise to infinite annoyance, and may be exasperatingly pertinacious and recurrent.

Verruca of the scalp, incident to comb wounds, continually gives rise to slight hemorrhages, which glue the hairs together. Montgomery advises the curette for their eradication, the nose of the instrument being firmly pressed against the base of the growth, which readily scrapes off, leaving a freely bleeding surface level with the scalp, which is then treated with trichloracetic acid made fluid by adding a drop of water to a few crystals in a watch-glass. Thereafter the acid is sopped well with boric acid solution. He makes no mention of the possible feelings of the patient whilst this pleasant treatment is being carried on. He also speaks in enthusiastic terms of the value of the high-frequency spark for warts thus placed, but fails to caution against an almost explosive combustion of the hair which may enliven this procedure. The specific for warts on the edge of the eye-lids is the oculist.

When warts are placed about or under the nails treatment is by radium, which the author states here shows at its best. When the warts are under the nail folds or free edge of the nails, forming a thickened, dirty colored, rough surface, which may easily be mistaken for an eczema, the horny covering should first be softened by a strong salicylic ointment (12 per cent.) spread on a cloth, applied and covered with a rubber finger stall. The white dead epithelium is then removed with a curette, exposing the red papillary growth, which also should be curetted and treated with trichloracetic acid.

Verruca of the palmar surface is treated by applying a piece of adhesive plaster. After the epidermis has peeled off the wart is curetted and treated by trichloracetic acid or by x-rays or radium. Similar treatment is applied to warts of the sole of the foot. Salicylic acid, however, is here employed in the form of a salve, a mixture of lanolin and vaselin incorporating 12 per cent. of the acid. This is buttered on a piece of cloth and spread over the affected sole. When the epithelium is thus softened the wart is again treated with trichloracetic acid, the author stating that because of the sensitiveness of the sole this must be done under general anesthesia. X-ray and radium are also excellent means of treating these warts. It is stated that these lesions of the sole require twice the radiations which would be efficient for other skin surfaces.

IS PURGATION JUSTIFIABLE?—Experimental observations made on animals have convinced Alvarez that purgatives should not be given before operations because some of the purgatives owe their effects to the fact that they are irritant poisons that must be removed quickly from the body. Others act by interfering with intestinal absorption and by upsetting the balance of salts. In either case they bring about pathologic conditions. The body is weakened and not strengthened. The dehydration of the body and the upset in salt balance are bad, particularly before an operation in which there may be hemorrhage and vomiting. With magnesium sulphate, there may be an increased amount of fluid in the bowel to disturb those who want it empty. In operations on the colon, liquid contents are harder to control mechanically than are solid masses. There is an increased growth of bacteria. There is some evidence that there is an increased absorption of toxins, and a greater permeability of the mucous membrane to bacteria. Undigested food may be carried down into the colon to supply increased pabulum for the bacteria. By weakening some parts of the bowel and making others more irritable, the even flow of material from stomach to anus is rendered impossible. Whether from disturbances in motility, in absorption, in the circulation, or in the bacterial conditions, there certainly is a tendency to flatulence and distention.

When the bowels must move frequently during the night, the loss of sleep is considerable. The purgation is particularly trying if the patient is wearing a large cast, has a broken leg, or other painful lesion which makes each resort to the bedpan an ordeal. If the patient should happen to have some intestinal obstruction, a gangrenous appendix, a badly diseased Meckel's diverticulum, or adhesions forming around some pus, purgation may directly cause death. Purgation makes the bowel react so poorly to drugs that there may be grave difficulties in meeting postoperative emergencies. Emptying the bowel by starvation and purging makes the resumption of colonic activity much more difficult. The colon must be filled and distended to a certain extent before it will empty.

The fact that children and nervous women will sometimes begin vomiting during the night, before the operation, Alvarez thinks, shows that the purge must be responsible for some of the postoperative nausea and vomiting. The ether adds the finishing touches to what was begun the night before. It is suggested that food be given as late as possible before operation; that even enemas be avoided if not absolutely necessary; that water and solid food be given by mouth as soon after operation as possible; and that purgatives be avoided after operation as well as before.—*Jour. A. M. A.*

A CASE OF "SEEING RED."—While on military service Hilbert was called to see a child in a village, who had been suddenly taken ill. It was a healthy looking girl aged $8\frac{1}{2}$, who had eaten the scarlet berries of the *solanum dulcamara*. She had vomited and some of the fragments of these berries could be seen in the vomit. The child was very restless, threw herself about in the bed and complained of pain in the head and stomach, giddiness and palpitation, and said that "everything is red, of the same color as the berries that I have eaten." The face was flushed and the pupils dilated *ad maximum*; small letters could not be read, and there was also paralysis of accommodation. The skin felt very dry, the pulse was 120, sometimes intermittent; the heart sounds were pure. Pressure over the stomach region caused pain. It was therefore a case of acute poisoning from *solanum dulcamara*.—*Homœopathic World*.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

HAHNEMANN

Hahnemann's many translations prove that he was a master in linguistics. He understood even somewhat of Chaldaic works. This explains to a great extent his intimate relationship with Professor Adam Beyer. The two would often meet in the evening and converse most animatedly about the syntactical and higher critical subjects of Latin and Greek; and the Leipsic professor listened with special attention to the critical acumen of his medical friend in many a philological controversy. "Officia Ciceronis," edited by Beyer, had an honorable place in his study.

His social relations with his patients were most exemplary, for as a physician he was extremely humane and compassionate towards those seeking help, and was always ready and willing to make any sacrifice of time and effort. He kept an exact register concerning his patients, punctually recorded therein with his own hand the symptoms of their diseases; never put their own words into their mouths when examining them with reference to their ailments, but earnestly entreated each one to describe the symptoms. He would ask where the patient resided; in what relations of life he lived; how he managed his household; how, and how much he worked; how he disposed of his time, etc. The numerous letters from his patients, after being entered in a journal, were immediately pasted in covers, all of which bore upon labels the number, year and date. All these covers and numerous letters, all his journals and name registers, were taken with him to Paris.

He earned very large sums every year through his extensive practice in the capital of France. Unfortunately, he could no longer derive advantage from his income as regards his own person. He saw himself compelled, by his change of residence, to lead habits of life to which he was wholly unaccustomed and which were quite the reverse of those of the reactionary Germany of his past existence. He lived in a free and inviting atmosphere. He had to ride in a carriage very often, dared smoke but little tobacco, was necessitated to change his accustomed food and drink for others, to go to bed much later than he had previously done, and to lie in bed very often until ten in the forenoon, so that he was compelled to dine and sup much later. There were evening visits to the conservatoire, the Italian opera or possibly the theatre.

We have the following memorandum in Hahnemann's own handwriting. He ordered his patients to observe a strict diet on account of the small doses

and the great power of the medicine. "Avoid," he said, "spices, tubers and cabbage, acids, tea and coffee, spirituous and similar drinks." He forbade all "fumigation, perfumery, hair pomades, tooth powders and tinctures, mineral baths, warm footbaths, salves, plasters, poultices, blistering plasters, hairbands, leeches and cupping glasses." He showed himself no less hostile to all "bleeding, blistering with Spanish flies, burning, cutting, and all sudorifics, emetics and purgatives." On the other hand, he advised "plain and substantial food, milk, buttermilk, cocoa, beef and mutton tea or soup, drinks of cold water, a walk or drive one or more hours daily, cleanliness and neatness, regularity in meals and hours of sleep, a moral life and a firm trust in God."

Although Hahnemann toiled from early morning until late at night in Cœthen, yet he could not attend to all his practice himself, and employed Dr. Lehmann as an assistant. He esteemed this assistant more and more highly every year because the latter had the rare frankness to oppose his employer so often. Hahnemann well knew that we arrive at the truth by a due estimation of its contradiction.

Dudgeon says: "The portraits of Hahnemann all represent him with his hair elaborately curled. It would seem that he was in the habit of getting it curled as early as 1819. Mr. Cameron, who was with Hahnemann during his residence in Paris, tells me that if he went to see him early in the morning, which he frequently did, he always found him with his hair up in curl papers."

In religion Hahnemann was brought up a Lutheran. Hering said that it was Lessing's controversy with Gotze that formed Hahnemann's religious views for life.

Hahnemann retained his vigor until the time of his death. Dr. Richard Hughes, in a lecture before the London School of Homœopathy in 1877, said of Hahnemann "to make the Hahnemann of 1830-1843 our guide is, I think, to commit ourselves to his senility." This called forth from Dr. H. V. Malan the following letter: "I have looked over your lecture at the opening of the London School of Homœopathy, and, as a pupil of Hahnemann, the last living I believe, and having spent about a year and a half in 1841 and 1842 with him, and under his constant teaching in Paris, I wish to state that his intellectual powers there were not those of 'senility;' far from it! I have seen him make many remarkable cures, and heard him teach and speak with wonderful accuracy, learning and judgment, adorned with that deep modesty which was his remarkable attribute. He never prescribed nor paid any visits to the patient's bedside without taking notes of the case and consulting the materia medica; he never alternated medicines, no more than he ever mixed two together. I often saw him use very high dilutions, and one of his most remarkable cures was with one single dose of a very high one (Jenichen's I believe), and I have frequently heard him say that the thirtieth was not to be fixed as the limit. As to his teaching, I never heard any equal to it; and having endeavored to follow it, as far as able, I have often expressed the thought that when we can do as well as he did, it will be time enough for us to try to do better. I may now sincerely add that in my thirty-five years experience I have never yet done—or seen anyone doing—as well as he did, nor have I had one occasion to find his teachings incorrect. Pray excuse these few words from one of his pupils,"—H. V. MALAN.

DR. T. L. BRADFORD.

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FIFTY-FIFTH ANNUAL SESSION
Pittsburgh, September, 1918

PRESIDENT'S ANNUAL ADDRESS.

BY

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(Delivered before the Homœopathic Medical Society of the State of Pennsylvania,
September, 1918.)

It is indeed a peculiar and special privilege that any individual might covet to be in a position at this time to address an organization, the reason for whose union and existence is the conservation of the health of the man-power of the nation. When we remember as we must, looking back upon the years that have gone, how woefully at times we permitted the opportunities of doing our best for the elevation of the physical standards of the people, to pass by; how, in our haste and anxiety to care for the sick we forgot that other extremely important function of the physician—teaching people how to live—we must, in view of the present conditions of the world and the nation, at a time when man-power counts as it never did before; when the physical standing of the individual is being investigated as never in the past, we must, if we expect to retain the confidence of the people, determine and solemnly covenant that in the future, we shall perform the full function of the physician combining the qualities of teacher and healer.

It is not right, it is not just to the true standards of our profession that we should stand by taking our toll from the harvest reaped by man from indulgence in social evils, without doing all in our power to lessen such evils and their effects. It is not right that as individuals or as an organization, with the knowledge we have of the pernicious and degrading influence and the lowering in efficiency that over-indulgence in alcoholic beverages brings; it is not right not to stand boldly and openly for the things that as physicians and scientists we know to be true, whatever our personal predilections may be.

I would, therefore, recommend that this organization go on record as commending the attitude of the military authorities in reference to the control of the so-called social evil, that we commend also the attitude of the authorities of the State of Pennsylvania in insisting that hospitals receiving State aid shall provide adequate quarters and proper treatment of these cases. It is time we dragged this question out into the light of open day and attacked not alone from the moral standpoint but from the economic as well and as is being done in the army, attacked by education, by recreation, by diversion, by isolation, by prophylaxis or by any other means that may be developed. Let us protect first, let us educate first and if necessary, cure afterwards.

As the conservation of the health of individuals is the supreme care of our profession, as it is our duty to the nation to see that the best and greatest powers of the people are conserved for the benefit of the State, we should recommend to the Legislature of the State of Pennsylvania, the adoption of the prohibition amendment to the National Constitution.

The prevention of disease is the function of science and society—society must provide the way, society must use the means and bear the cost. We as physicians and scientists should not permit society to be the first in the field of these endeavors. The education of the public in reference to the prevention of disease, in the care of the child, in matters of State sanitation and personal hygiene, should be a large part of our work. We have been asleep for years. We have neglected our opportunities. God grant that we remain awake. The war and its necessities have aroused us and the public as well. We must not only see that these things are done but that they are not over-done. We must act as the balance wheel to prevent over-enthusiastic but well-meaning

individuals from doing too much. Those things that intimately touch our profession as well as the welfare of the individual should be scrutinized carefully before being adopted.

State Health Insurance and Workmen's Compensation, for instance, have been linked together in the minds of certain individuals, but when carefully looked into, they present entirely different aspects. Workmen's Compensation Insurance is not compulsory social insurance at all. Compensation is merely a modern substitute for an ancient right, the right of the individual to obtain compensation for injuries received. In passing we might suggest to our legislative committee, the propriety of considering carefully any future amendment to the present Compensation Law, that the rights of physicians as well as employer and employee be preserved.

We as physicians are interested in State Health Insurance and while we are willing to do anything for the public welfare, we should not permit ourselves to be carried away by the enthusiastic assertions of well-meaning but possibly mistaken individuals. Advocates of these measures do not give much consideration to the particular facts of American life or the disposition and opinions of various classes of people in our society who would be most directly affected by such legislation.

Our country recognizes and encourages the independence of the individual in every relation of life and nothing should be done that in any way lessens that independence or lowers the self-respect of the individual.

State Health Insurance is supposed to help especially and to be asked for by the working man. Yet Samuel Gompers, that staunch advocate of the rights of the working man, who has proven himself to be also a staunch patriotic American—and these two things do not always go hand in hand—says, "We ask that when you recommend an investigation of social insurance, it shall be with the understanding that the rights of the workers and the freedom secured by them, shall not be frittered away by a patch on our social system, and that under that patch, there shall not be a germ that shall devitalize their American citizenship and take away from them, the vital principle of freedom of action in the exercise of their normal activities and their higher and best concepts of human welfare combined with freedom. That is the attitude of the American labor movement as I best can express it."

Health Insurance would give an institutional instead of a personal character to the greater part of the work of the medical profession.

When a bill on Health Insurance is presented to our State Legislature, our legislative committee should be on guard to see to it that neither the inherent rights nor the privileges of either the individual or the medical profession are assailed.

When the roll of honor is made up at the close of this war, high up on the scroll of professions that have given most and also those who have gained most, will be the profession of medicine.

Gradually as the full import of the war and the absolute necessities have opened up to them the members of our profession with personal and mutual sacrifices, unexcelled by any other, with patriotic and humanitarian impulses kindled by the needs of the nation have responded to the call and have mobilized their forces in the greatest drive against disease and injury ever inaugurated.

With intensive special training at the camps and in hospitals, with experiences gained in the very theatre of war itself, the profession has nobly done its part toward the winning of the war.

Dr. Crile says, "More progress has been made in surgery of the chest and abdomen, in the treatment of wounds, of infection, of hemorrhage and exhaustion, more knowledge has been accumulated of splints, of apparatus and of every applicable mechanism in the three brief years of war than in the past generation."

The war has brought about vast, almost incalculable economic and social changes. A common interest has brought about a common understanding. Working together for mutual benefit has knit individuals, communities and nations closer together and a common cause and a common danger have engendered and will continue to foster a closer union between individuals and peoples and a greater respect for the opinions, customs and habits of others.

Can we expect that our men when they return to us, when our organization welcomes them back home again, can we expect them to be governed by the same feelings towards this and other organizations as before the great experience through which they are passing?

Proving themselves equal in ability from both the military

and medical standpoint, as their advancement in rank would indicate, and being so recognized by their comrades in the fray, having fought shoulder to shoulder in the drive against death and disease and having attained a mutual respect that danger and work well done brings about, what will be their attitude on their return? We may as well face the inevitable: amalgamation will be the result.

If *similia similibus curantur* is a law of nature, it cannot die. If we as physicians have as our first consideration the preservation of the health of the individual, what moots it what name we practice under? Let us go on doing our duty as God gives us light to see it, practicing our profession for the benefit of humanity and not primarily for the benefit of any school or sect—boldly stating our beliefs whatever they may be and continuing to do so, no matter in what company we may be found.

We are a large factor in a great war. Ours is a great and wonderful opportunity. Many of our men have gone, some never to return, having paid with their lives for their devotion to the cause.

It is for us here in this annual meeting, to firmly resolve to bend all our energies toward a termination of the war, to firmly resolve with an unshakable determination that those that have died fighting for the rights of the free people of earth, shall not have died in vain, and that whatever our education, our experiences and our individual abilities will permit, shall be given to the country for but one end, a termination of this war with victory, the terms of which shall be dictated by us and our Allies.

In Flanders' fields, the poppies blow,
Between the crosses row on row
That mark our place. While in the sky
The larks, still bravely singing, fly
Scarce heard amid the guns below.

We are the dead. Short time ago
We lived, felt dawn, saw sunset glow
Loved and were loved, and now we lie,
In Flanders' fields.

Take up our quarrel with the foe,
To you from failing hands we throw
The torch. Be yours to hold it high.
If ye break faith with us who die,
We shall not sleep, though poppies grow
In Flanders' fields.

BLOOD TRANSFUSION BY THE SODIUM CITRATE METHOD.**COMMENT ON A SERIES OF SIXTY-SIX TRANSFUSIONS IN
FIFTY-TWO PATIENTS.**

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To the laity, blood transfusion possesses the potent appeal of the dramatic and the miraculous. One conjures up the picture of the patient, shocked and in extremis, magically snatched from death by the administration of the life-giving blood. And it is to be admitted that the good effects of transfusion are immediately apparent. The implied self-sacrifice of the donor who voluntarily gives up large amounts of blood adds interest to the event. It is "good copy," and newspapers feed the flame by detailing these features without particular regard for accuracy. Now, while a certain amount of interest inherently attaches to the performance of blood transfusion, the chief reasons for the attention it attracted were on the part of the laity its rarity and on the part of the profession the technical difficulties involved. Life-saving events which are common every-day occurrences only bore us. The fact that we save our life daily by eating food seems to us utterly unnoteworthy. Routine operations by adept surgeons, the modern treatment of infected wounds, the specific therapy of various infectious diseases, all of which save thousands of lives are so usual that we ignore them. Up until recently, the technical difficulties of successful transfusion were such as to deter all but the most skilled surgeons or those who had made a special study of the subject and hence the operation was of considerable scientific and medical interest.

The situation regarding blood transfusion has undergone a radical change in the last few years. This will be appreciated when we state that many more transfusions have been done in the past five years than in all previous medical history. Previous to this time, formidable obstacles were almost insurmountable methods, no assurance that the blood itself would not be harmful and no scientific data to satisfy one of

the definite usefulness of the procedure. What was required was:

First—A simple method of administration;

Second—A simple method of demonstrating compatible blood;

Third—Proof of the usefulness of transfusion in medicine.

The first two of these desiderata have been attained. This at once cleared the way for the wide-spread performance of blood transfusion and as a consequence there is accumulating a large amount of evidence which should in the near future show conclusively and specifically its field of usefulness. These three basic factors in transfusion may logically be considered seriatim.

TRANSFUSION METHODS.

The basis of all transfusion methods is the transference of the blood from the donor to the recipient essentially unaltered or at least in a condition that does not subtract its beneficial constituents or add toxic elements. The principal obstacle is, of course, clotting, which introduces a physical factor entirely precluding the operation. Three ways of avoiding clotting suggested themselves to experimenters in transfusion. The blood vessel of the donor might be directly united with that of the donee or connected by short or long metal, glass or rubber tubing. The blood of the donor might be withdrawn in a syringe and immediately reinjected; or received in a large container and at once reintroduced; or withdrawn, defibrinated and reinjected. The blood might be withdrawn, clotting excluded by the addition of anticoagulants and the fluid administered to the patient at the convenience of the operator. Blood transfusion by blood vessel anastomosis is known as direct transfusion. Methods by which an agent is introduced intermediate between the donor and donee such as cannula, tubing, syringe or glass container, constitute indirect transfusions.

The successful union of the blood vessel of one individual with that of another naturally calls for considerable sur-

gical refinement and this reached a high degree of perfection in Carrel's end-to-end suture of blood vessels. Crile's¹ cannula method and the various modifications were closely similar. Slight departures were the intervention of longer or shorter metal glass and rubber tubing coated with paraffin. The general principle was the same in all, the close connection of two blood systems with little or no outside exposure. The idea occurred to the first experimenters, Dr. Lower² using it on animals in 1666 and Denys² in 1667 in man, both employing quills to connect the blood vessels. Two hundred and fifty years later, the same objections obtain to the method: The degree of surgical technic required, making it almost prohibitory; the cutting down on and obliteration of blood vessels of donor and donee; the impracticability of determining the amount of blood transfusion. (Libman and Ottenberg¹⁸ have lately suggested a method of ascertaining the amount). Transfusion should not be a major operation; by most of the above procedures it becomes one. It has been stated and it looks probable that the direct and cannula methods and their modifications will shortly be of historical interest only.

The withdrawal of blood by a syringe and its immediate reintroduction into the patient before clotting can take place would theoretically seem a very practical method and it has proved so in practice. It was first employed by Blundell³ in 1818 using only one syringe. Von Ziemssen⁴ adopted the syringe method in 1892 but his work, as McClure and Dunn⁵ state, was practically forgotten and the revival of the use of the syringe in transfusion by Lindemann⁶ in 1913 was hailed as a great advance. Lindemann's apparatus includes a set of twelve 20 c.c. syringes. With two assistants and with the operation carried out with dexterity and speed, this modern syringe method has been highly successful. As usual, a number of modifications have been suggested. The Unger⁷ device with one syringe is considered the best. Syringe transfusion is one of the chief present-day methods and has much to recommend it. Its chief advantages are that blood vessels are entered without skin incision, that the exact amount is measured and that practically unaltered blood is assured, thus almost eliminating, according to Lindemann⁸ post-transfusion reactions. On the other hand, rather expensive apparatus is required. There is the laborious cleaning and

sterilization of the many syringes and finally and especially there is demanded not inconsiderable technical skill.

The method of receiving blood in a large container and injecting it before clotting can take place is best illustrated by the Kimpton-Brown tube, a large paraffin-coated glass cylinder. These large glass containers and the method involved are quite popular with some surgeons, notably Percy, but the technic required is even greater than the syringe method. There is the further disadvantage of cutting down on blood vessels. The methods of Lindemann and Kimpton and Brown⁹ were both published the same month and year, July, 1913.

To withdraw blood, defibrinate it and reinject it is a relatively simple procedure and one that was favorably reported on as late as 1914 by Moss.¹⁰ Objections are the altering of the blood, the possibility of infection, the high percentage of reactions and preference given to still simpler methods. Injection of defibrinated blood is consequently an almost discarded operation.

Anticoagulants present a different angle to transfusion methods. In the direct union of vessels of donor and donee, the *sine qua non* is technic. In the syringe method, the essentials are technic and speed. With anticoagulants, the agent must be atoxic; technic and speed are in a sense minor features. Investigators along this line claimed that if blood could be effectually kept from clotting by a harmless chemical agent, the problem of transfusion methods would be solved. A number of such chemicals have been suggested and tried but only two seemed to meet requirements, herudin (leech extract) and sodium citrate. Soon, however, it was found that the toxicity of herudin made it dangerous and this left sodium citrate as the only available anticoagulant to be acclaimed or discredited. Hustin¹¹ in 1914 and Weil¹² and Lewisohn¹³ early in 1915 recommended the sodium citrate method and asserted advantages which demanded attention. The technic is the simplest and throws the methods open to anyone with an average amount of medical skill and care. The donor and donee are not side by side or in the same room. On the contrary, the blood may be removed from the donor, carried many miles, if necessary, given at the operator's convenience in six minutes, six hours or six days. Actually, the blood

could be taken in New York and given in Chicago. This does not mean that it is desirable to transport it any distance or to delay administering it a moment more than necessary, but it shows the possibilities of the method. In transfusing septic or other infectious cases, the element of danger to the donor is eliminated. It is interesting to note that these points of advantage are emphasized by Bernheim,¹⁴ a surgeon skilled in direct transfusion but now convinced of the tremendous superiority of the citrate method and of the relegation of instruments to the scrap heap. In the desperately ill or shocked patient, the minimum amount of disturbance is entailed as the transfusion is performed with ease without moving the subject from the bed. Expert assistants and nurses are not essential; with lay aid and simple apparatus a citrate transfusion can be satisfactorily carried out.

The important objections to the citrate method number about four, viz:

- 1—Other methods are simpler.
- 2—The good effects of citrated blood are inferior to those of whole blood.
- 3—The citrate of sodium is toxic, even dangerously so.
- 4—Post-transfusion reactions are more severe and frequent than with other methods.

The first two objections are quickly disposed of as at present we believe it is generally admitted that citrate transfusion is by far the simplest of all methods and that the effects of citrated blood are quite as beneficial as those of whole untreated blood. The toxicity of sodium citrate in large doses may be admitted. Lewisohn¹⁵ has shown that larger amounts than five grams are extremely toxic but that five grams may be introduced into an adult with safety. As the proper amount of citrate of sodium to be added is .2 to .25 per cent. and as the amount of blood is rarely over 1,000 c.c., thus requiring two to two and a half grams of citrate, the toxic feature of the drug is entirely eliminated. Even a transfusion of 1,500 c.c. only requires three to four grams of citrate which it is well within the safety limit. In modern transfusions, it is assumed that the bloods have been properly matched so that the post-transfusion reactions are narrowed to the rela-

tively common chill and fever which shortly follow the operation. Now it may be granted this is a frequent occurrence after citrate transfusions, though Meleney, Stearns, Fortune and Ferry¹⁶ in a comparison of the syringe and citrate methods show that the percentage of reactions is the same for both. They further show that the blood relationship of the donor and donee and the blood group of the recipient seem to have no bearing on the occurrence of the reaction. On the other hand, with strict attention to proper blood grouping and with perfection of the syringe technic which he has devised, Lindemann claims to have practically eliminated post-transfusion reactions. In our own series of sixty-six transfusions by the citrate method, the very great majority of patients had a sharp reaction in the form of a chill in about a half hour followed by a rise in temperature of two to four degrees. Occasionally there was vomiting, back-ache and herpetic or urticarial eruptions. Efforts to eliminate this reaction by employing fresh distilled water for salt and citrate solutions, careful sterilization of solutions and containers just before transfusion, maintaining the blood constantly at 37 degrees C and keeping it a minimum time outside of the body were unavailing. A citrated blood kept two days produced no greater reaction than one injected immediately. The exact cause of the reaction is not known. It does not appear to be due to the citrate of sodium as Garbat¹⁷ has shown in forty injections of 2 per cent. sodium citrate only 20 per cent experienced reactions whereas Meleney, Stearns, Fortune and Ferry¹⁶ in 196 citrate transfusions had 64.8 per cent. of reactions. Admitting that the post-transfusion chill and fever is at present an unpreventable and undesirable occurrence in a certain percentage of citrate transfusion, it may at least be shown that while it is an unpleasant episode it does not seem to be more than this and does not, as Bernheim¹⁴ has pointed out, "exert the slightest harmful effect on the future course of the illness or the progress of the patient." A minor and theoretical objection at first advanced against the citrate method was that it would decrease the coagulability of the patient's blood. This objection has proved invalid as the coagulability of the blood is actually increased after transfusion.

A survey of transfusion methods to our mind shows that for general purposes the citrate solution method is far superior

to all others. The frequent occurrence of the post-transfusion reaction while an objectionable feature of this method is not in any sense a serious drawback and is heavily overbalanced by its many advantages. Next to the citrate method, the syringe transfusion is the method of choice.

In the transfusions herewith reported, we have uniformly pursued the following:

Technic. A healthy donor of a suitable blood group is obtained and placed in the recumbent position with the arm hanging low. A blood pressure apparatus is adjusted to the upper arm and the pressure run up until the largest elbow vein is under great tension. A special double cannula of a good size, the inner cannula really being a hollow needle, is inserted. The appearance of blood at the opening of the inner cannula indicates that the vein has been entered. The inner cannula is withdrawn and the blood pressure is regulated by an assistant or nurse so that the maximum flow is maintained. This varies with the individual. The blood is received in tall narrow glass cylinders of 250 c.c. capacity each. An assistant with a pipet adds 2 to 2.5 c.c. of 10 per cent. sodium citrate solution in normal salt as each 100 c.c. of blood is collected. Two to five cylinders are employed according to the amount of blood to be transfused. The blood and citrate are well mixed by slowly inverting each cylinder a number of times after it is filled. The blood may be kept warm in a bucket of warm water. The recipient is brought to the edge of the bed and the arm with the best vein is allowed to hang low. A nurse squeezes the arm firmly above the elbow while the patient is instructed to stiffen the whole limb and make a hard fist. This brings out the vein which can usually be entered with a cannula in the same way as was the donor's vessel. When the vein is entered, attachment is made to a 250 c.c. burette with a long rubber tube, an apparatus similar to that used for salvarsan administration. The burette contains 50 to 100 c.c. of salt solution and when it is seen that this is freely flowing, the blood from the cylinders is poured into the burette through several layers of gauze in a funnel. The blood may be followed by 50 to 100 c.c. of salt solution to insure washing out all the blood in the burette and tubing. It should take about seven or eight minutes for 500 c.c. of blood to enter the vein.

This technic is practically that suggested by Lewisohn.¹⁵ The double cannula is a modification of the triple cannula devised by Lindemann⁶ for his syringe transfusions. Either one may be used and most instrument houses keep cannulas and needles of these types. After 500 c.c. of blood is obtained from the donor, the stream often thins down and finally comes slowly in drops. This is due to marginal clotting when the interior of the cannula is not finished very smoothly. It can be counteracted by passing the inner cannula through the larger one occasionally when the blood will again flow freely. The idea of collecting the blood in the narrow cylinders rather than in one larger receptacle is to bring the relatively small amounts of blood—100 c.c.—immediately in contact with the repeatedly added 2 to 2.5 c.c. of 10 per cent. sodium citrate. This avoids the danger of clotting when a very small percentage of citrate is added. In one or two collections in large flasks we have had embarrassing instances of partial clotting in spite of adding the .2 per cent. of sodium citrate. Lewisohn¹⁵ states that he has had to cut down on the vein in about 80 per cent. of cases. We believe if some attention is paid to bringing the recipient's vein under considerable tension by proper pressure this will seldom be necessary. In our 66 transfusions, it was only necessary to expose the vein in four instances—about 6 per cent. In all other cases the vein was successfully entered through the skin. Sharp needles are undoubtedly a great aid in this. We use 10 per cent. citrate solutions rather than 2 per cent. thus avoiding the addition of a large amount of fluid other than blood.

BLOOD COMPATIBILITY.

Compatible bloods, in the transfusion sense, are those which will mix, *in vivo*, without producing any untoward effects.

In a previous article,²⁵ we have discussed at length the suitability of one human blood for another and have pointed out that the accidents of blood transfusion depend on the failure to take this compatibility of bloods into account. For full details and the methods of recognizing suitable bloods, the reader is referred to this paper. Suffice it to say here that human bloods are divided into four groups based upon

agglutinating and hemolytic properties; that bloods are absolutely compatible when of the same group; that bloods are practically compatible when the patient's serum does not clump the donor's cells; and that in case of great emergency where there really is not time to make preliminary tests, a Group I donor may be safely used. It may be added that the emergency which demands this haste actually seldom exists and that the so-called emergency is more often an excuse than a reason for not doing preliminary tests to determine compatibility. Men who have done the most transfusions seldom perform the operation without first ascertaining the suitability of the bloods. It is especially important in patients who have been previously transfused. In such cases, the bloods of the donor and the donee must be directly matched before the operation even in the instance of a donor previously used, so that the possibility of the development of isohemagglutinins and isohemolysins may be excluded. This is clear if we recall that the clumping of the donor's cells by the patient's serum is absolute evidence of incompatibility.

RESULTS IN TRANSFUSION.

Of the good and bad effects of transfusion, the score is entirely on the side of the former, for with proper technic it is very seldom that any harmful or actually bad results attain from the introduction of new blood. Of course, gross carelessness, such as total disregard of blood compatibility, may result fatally, but such an error is comparable to the administration of a lethal dose of a useful drug. In general and with ordinary precautions, it may be said that blood transfusions are not infrequently life-saving, usually beneficial and at least do no harm if they do no good. On the other hand, it is probable the beneficial influence could be greatly increased and temporary results made permanent by the avoidance of certain misconceptions regarding the procedure. Chief among these is the idea that blood transfusion is the last resort in therapeutic measures, that the patient must be in extremis before it is advocated. It is an injustice to any therapeutic method to test it on the dying and while it is to the credit of transfusion that it has been life-saving in just such cases, yet its record of good results would be much

enhanced if it were employed at a time when the patient possessed some slight power of recuperation. We would protest strongly against the habit of waiting until the patient is practically hopeless before suggesting blood transfusion. Another error along the same line is the frequent request for transfusion in anemic subjects after operation. In such cases, it is much better to transfuse them first and put them in good condition to stand an operation. Still another misconception is the idea that one transfusion will accomplish everything that is desired. In some cases this is so, as in acute hemorrhage; but in other instances repeated transfusion of smaller amounts of blood at short intervals may be more desirable—this will be again referred to in discussing pernicious anemia. Rectification of these errors will probably be hastened by considering transfusion a minor rather than a major operation. Transfusion was a major operation; it is now a relatively simple procedure, and not one at all to be feared by the patient in whom it will cause a minimum amount of discomfort. In the entire series of sixty-six transfusions, we had no serious effects from the procedure itself in spite of the fact that a number of the earlier injections were done without preliminary tests. In one case, a second transfusion of the patient with his son's blood seemed to cause marked restlessness and dyspnea and for this reason the operation was stopped after 100 c.c. had been given. There were no subsequent symptoms or hemolysis. The first transfusion caused no trouble whatever; this illustrates the importance of preliminary tests even when the same donor is used.

The amount of blood to be injected has not yet been standardized and would necessarily vary with the disease or condition treated. We averaged about 500 c.c. in this series but this amount is considered a small transfusion. Some operators give habitually 1,000 to 1,200 c.c. The average is probably much less. Theoretically, we may consider new blood beneficial principally in four ways:

- By replacing lost blood.
- By furnishing coagulating factors.
- By stimulating blood productions.
- By contributing immune bodies.

On the basis of these possibilities, the desired amount would in one case be small, in another large and in another small and repeated. It is remarkable what beneficial results may be obtained from transfusions of only 500 c.c. As far as the donor is concerned it is quite safe to take an amount of blood up to one-fourth of his total quantity and the total quantity may be considered one-nineteenth of his body weight. The danger of over-transfusion to the patient is not great but in the case of children and small adults, Libman and Ottenberg¹⁸ point out it is better not to give more than one-fourth or at most one-third as much blood as a patient of that weight normally has.

We have done sixty-six transfusions in fifty-two patients and these illustrate common types of cases one is called upon to transfuse. They are conveniently tabulated as follows:

| Clinical Aspect | Cases. | Transfusions. |
|------------------------------------|----------|---------------|
| Pernicious Anemia | 13 | 19 |
| Leukemia | 2 | 3 |
| Purpura | 3 | 4 |
| Secondary Anemia, Hemorrhage | 15 | 17 |
| Secondary Anemia, Septicemia | 10 | 12 |
| Secondary Anemia, Malignancy | 3 | 3 |
| Secondary Anemia, Jaundice | 2 | 3 |
| Gas Poisoning | 2 | 2 |
| Pulmonary Tuberculosis | 1 | 1 |
| Meningococcic Meningitis | 1 | 2 |
| | <hr/> 52 | <hr/> 66 |

In pernicious anemia, we are dealing with a chronic, practically uniformly fatal disease of unknown origin. The hope of the patient is the blood remission and there is nothing as successful in inducing this remission as single or repeated blood transfusions. The next best thing is splenectomy and perhaps the combination of the two is the best of all. A cure by transfusion is not claimed or expected, but we may anticipate a remission in half of the cases. We may actually and immediately save a life by the introduction of new blood—we have observed these several times in our own series. We may take a bed-ridden patient and put him on

his feet and at work, comfortable and without subjective symptoms. A therapy which will do this is, as Lindemann¹⁹ says, to be respected. While observers are almost unanimous as to the beneficial effects of transfusion in pernicious anemia, it is only fair to say that Bloomfield²⁰ in a recent article dissents from this view and holds that there is no definite evidence that transfusion, splenectomy or the elimination of foci of infection prolongs the life of pernicious anemia patients. He admits, however, that "transfusion performed at a time when the patient is not refractory brought on remission in about half the cases, and enabled the blood count to be raised to a higher level than it reaches in cases not so treated." In this line, it is well to note the recommendation of McClure²¹ who urges systematic, often-repeated transfusion of blood in the disease. He states that usually a single transfusion in pernicious anemia is about as much good as a single inunction of mercury in syphilis. This is perhaps putting it rather strongly but it emphasizes the importance of frequent injections, say a week or two apart, until the blood is pushed up to normal. McClure²¹ advises splenectomy in conjunction with this treatment and feels that the combination of the two may prolong life indefinitely. Our own experience has been very satisfactory in this disease as far as temporary improvement is concerned, but we have not had the opportunity for repeated transfusion as suggested. The idea appeals to us. One case in particular responded promptly to small transfusions of 600 and 500 c.c. respectively, the blood rising from 2,000,000 to 4,800,000 red cells six weeks after the second transfusion. This held for seven months when the blood began to fall. A third transfusion of 600 c.c., one year after the primary injection, promptly raised the red cells from 1,710,000 to 4,500,000. The patient, sixteen months after the first transfusion, is working daily and without symptoms except moderate weakness. Another patient was a woman whose pernicious anemia was complicated by delirium tremens, a rather unusual combination. This subject was in a desperate condition with a wild mental condition, a high continuous temperature, loss of control of bladder and bowels and a marked anemia. A single transfusion of 600 c.c. acted almost magically upon her and enabled her to leave the hospital in a short time relieved

of all her symptoms except the anemia, which too was improved. On the other hand we have had refractory patients whom transfusion failed to help. On the whole, beneficial results predominated and might have been considerably enhanced by repeated transfusions.

In leukemias, transfusion is practically valueless for though it controls in part the accompanying anemia it has no effect upon the primary fatal disease. In two cases of acute leukemia with marked anemia transfused by us, life was perhaps prolonged a few days but death soon occurred. Reports on chronic leukemias are likewise discouraging.

In purpura, we gave two patients single transfusions, and one patient two. All of the patients died. This was disappointing as we were led to believe from the experience of others that the procedure was very valuable in this disease. Unger,²² using his own syringe method, also had poor results in four out of six cases. A larger series of cases might return better figures.

We had no opportunity to try blood transfusion in hemophilia but there is universal agreement by those who have that the results are brilliant. Transfusion is a specific for the bleeding in hemophilia though it does not cure the disease. It will succeed, according to competent observers, after all other measures have failed. McClure and Dunn⁵ say it stops the bleeding immediately.

Still more successful is transfusion in bleeding of the new-born. Here it is a specific, acting not only as life-saving measure but curing the disease. Unger²² calls attention to the fact that in melena neonatorum, one should not temporize (and perhaps lose a life) with other remedies such as serum or blood subcutaneously, but proceed at once to transfusion, which succeeds, as in hemophilia, after other measures fail. The amount of blood required in the new-born is, of course, relatively small, say from 50 to 150 c.c.

Secondary anemia due to acute hemorrhage has a sovereign remedy in blood transfusion and in this field the procedure has won its best reputation. Such cases, especially when due to wounds or accidents, are often accompanied or dominated by the phenomenon of shock and for shock alone transfusion does not seem to be particularly valuable. But where the hemorrhagic features have almost exsanguinated

the patient, transfusion has again and again averted a fatality. And this has not been alone through its contribution of new blood but also through its ability to check bleeding. In cases of peptic ulcer or portal cirrhosis with massive hemorrhage, there have been rapid reductions of the anemia and prompt checking of the hemorrhage. In the intestinal hemorrhage of typhoid fever, the method has been found very useful and it has been suggested that such patients should have a donor available in case of accident, the ideal donor in this case being one recently recovered from typhoid or immunized. In the present series we have had no opportunity to test the value of transfusion in typhoid. In all these cases of acute hemorrhage from disease, it is not clear how the transfusion checks the bleeding but the fact remains that it frequently does. The casualties of the present war have unquestionably furnished innumerable examples of acute bleeding demanding transfusion and we should eventually have conclusive data as to its value in wounds and accidents. When the patient is subject to sub-acute or chronic hemorrhage, such as occurs in small repeated losses of blood in uterine fibroid, the secondary anemia produced may be moderate or as profound as in the acute bleeding. Transfusion is usually called for here after the patient has been operated and suffering from the combination of shock and anemia. Now while the results are often satisfactory and at times brilliant, it is in just such cases that we believe the pre-operative transfusion should be urged as the logical procedure and one much more conducive to satisfactory effects. In secondary anemia of this class, we have transfused both before and after operation and have found the ante-operation method far preferable. In post-operative cases, we have unfortunately been asked to transfuse a number of times when the patient was in extremis with no benefit but the most temporary, the patient dying a few hours later.

In secondary anemias due to sepsis, as in the puerperal cases infected with the hemolytic streptococcus, the anemia, though without hemorrhage and entirely hemolytic, may be extreme. The patient's hemoglobin may be reduced to 10 or 20 per cent. The injection of blood must not only overcome the anemia but by virtue of its immune properties destroy the streptococcus or annul its toxic products. In ad-

dition some of these patients, as in abortions, have lost considerable blood by hemorrhage. The proposition is, therefore, a difficult one. The case reports in these septic anemias are few and we are unable to draw definite conclusions as to the value of transfusion in this sphere. Unger²² transfused seven cases of puerperal sepsis and lost all of them. When the streptococcus is in the blood, the chances are reduced though Ottenberg and Libman²³ had one recovery out of two streptococcic infections. In two cases of our own, in which blood cultures, however, were not made, we obtained excellent results and complete recoveries, using small transfusions and adding streptococcus-colon vaccine to the citrated blood. The reaction following was very marked, the patients suffering a violent chill with cyanosis and subsequently temperatures of 106 degrees F. The next day, however, the temperature dropped to normal and recovery was fairly rapid. In another case in which the streptococcus was isolated from the blood, the patient died without any particular temporary or other improvement from the transfusion. A number of post-operative cases of sepsis in both men and women were transfused in the late stages without success. Transfusion is seldom called for in cases of local or general sepsis unless anemia is a feature, so its value in these conditions is not finally determined. The relation of transfusion to infection is further discussed below.

Malignancy may cause secondary anemia both by the hemolytic effects of the growth and the repeated bleedings which occasionally occur. The anemia is seldom marked and the relief from transfusion is only proportionate to its effect upon the anemia. The effect upon the carcinoma or sarcoma is nil and the value of transfusion in malignancy is, therefore, naturally very slight. We transfused several cases of carcinoma of the stomach and while the patients protested they felt better, the result was inevitable.

In jaundiced patients, there is not infrequently alarming and even fatal post-operative bleeding. This well recognized fact has led to the employment of both pre- and post-operative transfusions. Ottenberg and Libman²³ gave thirteen transfusions in twelve cases of hemorrhage secondary to jaundice with most disappointing results. Four of their cases were pre-operative. We had two jaundiced patients

with marked post-operative bleeding. One case died. The other received two transfusions and in this patient the administration of the citrated blood was undoubtedly a life-saving measure.

Poisoning by illuminating gas is said to be best treated by first bleeding the patient and then transfusing a large amount of blood. We followed this method in two hospital cases but both died. Others have been successful.

The one case of pulmonary tuberculosis transfused was injected immediately following a hemorrhage. The hemorrhage ceased but there was, of course, no effect upon the general course of the disease. The same holds true of the meningococcic meningitis we transfused, no benefit at all being obtained. Transfusion has also been employed by various investigators in almost all sorts of diseased conditions other than those mentioned above, but the results have been either indecisive or unsatisfactory.

Blood transfusion in infections possesses theoretical possibilities so suggestive that special mention should be made of them. Contributions of normal blood to individuals suffering from severe general infections have not given results consonant with theoretical expectations. On the other hand, reports of immune blood or serum given subcutaneously, intramuscularly or intrathecally in scarlet fever, measles, poliomyelitis have been very encouraging. This leads to the hope of a wide field of usefulness for blood transfusions in infection by employing immune blood as in convalescent or recently recovered scarlet fever, measles, poliomyelitis, typhoid or dysentery patients. This passive immunity might also be conferred from subjects artificially immunized. Wekesser²⁴ cites a case apparently suffering from subacute infective endocarditis. A vaccine was prepared from organisms isolated from the blood and used to immunize four volunteers. Later the immunized blood of these volunteers was employed in giving six blood transfusions with excellent results, the patient well and working ten months after treatment. Individuals vaccinated against typhoid might also be useful in transfusions in this disease. We have also attempted active immunization by adding small doses of stock vaccine to the citrated blood. The sphere and value of transfusions in these lines are matters the future will determine.

SUMMARY.

Up until the last few years, the performance of blood transfusion, even by competent surgeons, was almost prohibitory on account of technical difficulties and disastrous results from incompatible blood. These obstacles have been eliminated by progressive simplifications in technic and short, simple tests for conclusively demonstrating compatible blood. As a consequence, more transfusions have been done in the last five years and are being performed at present than in all previous medical history. This means that a great mass of data is being accumulated upon which we may properly evaluate blood transfusion. Transfusion is not a panacea. At present it is probably over-valued and used in fields where it is not indicated. This is usually the case with all new therapeutic agents. It is well to remember that, in general, the more valuable a remedy the more specific and limited its field of application.

Of the various improvements in technic, the citrate transfusion is so simple and possessed of so many advantages that it approaches the ideal method. By it, transfusion is reduced from a major operation to a simple procedure open to any competent and careful physician. The test for compatible blood is likewise so simplified that it can be accurately accomplished with little or no trouble and apparatus in fifteen to thirty minutes. In the face of a real emergency, a Group I donor may be used without preliminary tests.

The collected reports on blood transfusion demonstrate that it is unquestionably a life-saving measure, especially in anemias with acute or chronic hemorrhage. They also indicate the unfortunate custom of employing transfusion as a last resort procedure whereas we believe much better results could be secured by transfusing patients early. There is also evidence that pre-operative transfusion is more desirable than post-operative injection in anemia patients. Too much should not be expected from a single transfusion. Repeated transfusions may be necessary. In bleeding of the new-born, transfusion is specific and curative. In hemophilia, it is specific for the bleeding. In pernicious anemia, it is at present the best remedy we have and induces remissions in about half the cases; frequent repeated transfusions are often indicated.

In secondary anemias with acute or chronic hemorrhage, transfusion is invaluable. In secondary anemias with septic hemolysis as in streptococcus infection, transfusion is disappointing. In various infections, the suggestion to use immune blood for transfusion, presents interesting possibilities. Where hemorrhage complicates, as in typhoid, the indications are doubled.

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NORMAL ISOHEMAGGLUTININS: THEIR OCCURRENCE IN HUMAN BLOOD
AND THEIR RELATION TO BLOOD TRANSFUSION.

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It is well known that the blood serum of many animals is normally capable of agglutinating and dissolving the red corpuscles of animals of a different species. For instance, normal goat serum will clump and dissolve the red blood cells of a rabbit. This power depends on the presence of so-called normal heterohemagglutinins and heterohemolysins, and these bodies are probably responsible, in part at least, for the toxicity of foreign blood. If, further, the red corpuscles of an animal of one species are injected into an animal of another species, the recipient animal will develop a greatly increased power of agglutinating and hemolyzing the donor's corpuscles, due to a marked increase of the hemagglutinins and hemolysins. In this case, the particular antibodies are referred to as immune heterohemagglutinins and hemolysins and are highly specific. Such immune bodies are of great practical use in the laboratory, as, for example, the immune hemolysins obtained by injecting rabbits with sheep's red corpuscles and employed in the Wassermann test.

It was not well known until recently that the serum of many animals normally agglutinates the red cells of other but not all animals of the same species. Such hemagglutinins are termed *normal isohemagglutinins*. *Parallole isohemagglutinins* but less constant are normal isohemolysins. Like heteroagglutinins, isoagglutinins may be greatly and specifically increased by injecting red corpuscles of one animal into another of the same species. The resulting bodies are immune isohemagglutinins. While the injection of red cells into another animal of the same species greatly increases isoagglutinins and isohemolysins, the injection of an animal with its own blood corpuscles does not produce hemagglutinins or hemolysins. This is in accord with the general rule that an animal does not form antibodies against its own tissue cells. We need not

look then for the production of autohemagglutinins or auto-hemolysins, though in very rare instances they may occur as an exception to this general rule, as in the autohemolysin found in paroxysmal hemoglobinuria.

Normal isohemagglutinins are present in relatively small amounts in the blood and therefore require low dilutions for demonstration of their activity. They are specific and separately absorbed from the serum by the corresponding red cells. They are relatively thermostable and are active in serum in which the hemolytic property has been destroyed by heating to 56° C., thus removing complement. They resist drying and may be preserved this way. They are hereditary and in this inheritance follow the Mendelian law. They have been observed in lower animals as rabbits, cats, dogs, rats, horses and steers but they seem to be rare and irregular in lower animals as compared with their frequency and constancy in man. In many animals they are latent, developing only with immunization. In man, however, normal hemagglutinins are nearly always present and demonstrable. The normal isohemagglutinins of man are present alike in health or disease and Moss from careful observation states he found no constant differences in the agglutinating and hemolyzing abilities of serums in health and disease.

If the clear normal blood serum of one individual is mixed with the washed suspension of red blood cells of another individual there may or may not be observed prompt agglutination of the erythrocytes in question. And when this test is applied to a large number of men, it will soon be noted that human blood falls into definite classes according to its ability to agglutinate or be agglutinated by the blood of another individual. A's serum may agglutinate B's corpuscles while B's serum will fail to clump A's corpuscles; or A's serum may agglutinate B's, C's and D's corpuscles while their serums all fail to agglutinate A's cells, and so on. On this basis, all human blood, normal or pathologic, may be divided into four sharply separated groups, which, for the individual, are permanent. They are:

GROUP 1—Serum agglutinates corpuscles of Groups 2, 3 and 4.

Corpuscles agglutinated by no serum.

GROUP 2—Serum agglutinates corpuscles of Group 3 and 4.

Corpuscles agglutinated by serums of Groups 1 and 3.

GROUP 3—Serum agglutinates corpuscles of Groups 2 and 4.
Corpuscles agglutinated by serums of Groups 1 and 2.

GROUP 4—Serum agglutinates no corpuscles. Corpuscles agglutinated by serums of Groups 1, 2 and 3.

While there is no disagreement at all about the specific action of each of these groups, there seems to be some slight confusion in regard to the numbering of the classes. Moss in his original article referred to the above Group 4 as Group 1 and vice versa, Group 1 as Group 4. But at the end of his article, he gives credit for priority to Jan. Jansky who likewise recognized four groups though Jansky's Group 1 is Moss's Group 4. Zinsser and Kolmer in their books follow the Jansky classification while articles by Brem, Vincent and Sanford, for example, follow Moss. We have noted other papers in which Groups 2 and 3 were similarly confused. The matter is not of great importance except that it may lead to errors of understanding of the frequency of the various groups and the compatibility of different bloods in transfusion, unless the action of the group rather than the number be kept in mind. The grouping of our table and this paper is that of Jansky. It has been suggested that in this classification, Group 1 may be considered the strongest group, its serum clumping the cells of all other groups while its own cells are unaffected by the serum of Groups 2, 3 and 4. And conversely Group 4 may be called the weakest group, its cells being clumped by the serum of any other group and its serum failing to clump any cells. Groups 2 and 3 are reciprocal groups, clumping each other, and the weak Group 4 and both being clumped by the strong Group 1. Naturally, of course, no serum agglutinates the cells of its own group.

The theoretical mechanism of the isoagglutinin groups is relatively simple and depends on the active clumping antibody, the agglutinin, and the passive clumped antigen, the agglutino-gen. The serum contains agglutinin: the red cells contain agglutinogen. It is assumed that in human blood there are two agglutinins A and B and correspondingly two agglutinogens a and b. But they are not uniformly distributed. Group 1 contains both agglutinins, A and B, but no agglutinogens and can therefore clump any blood containing agglutinogens, but cannot be clumped. Group 4 contains both agglutinogens a and b but no agglutinins and can therefore be clumped by any

blood containing agglutinins but cannot itself clump any blood. The blood of Group 2 contains agglutinin A and agglutino-gen b. The blood of Group 3 contains agglutinin B and agglutino-gen a.

The relative frequency of the different groups is indicated in the following table:

TABLE I—PERCENTAGE OF BLOOD GROUPS ACCORDING TO VARIOUS OBSERVERS.

| Group 1 | Group 2 | Group 3 | Group 4 | Indivs. tested | Authority |
|---------|---------|---------|---------|----------------|-----------------------------------|
| 43 % | 40 % | 7 % | 10 % | 100 | Moss |
| 36 % | 47 % | 11 % | 5 % | — | Von Dungern & Hirschfeld |
| 46 % | 39 % | 13 % | 2 % | 67 | Meleny, Stearns, Fortuine & Ferry |
| 46.2 % | 42.4 % | 8.3 % | 3.1 % | 1000 | Karsner |
| 45 % | 40 % | 10 % | 5 % | — | Vincent |
| 39.3 % | 42.9 % | 12.9 % | 4.9 % | 163 | Sappington and Seltz |

Moss's figures are usually quoted. It may be said that there is a rough agreement as to the incidence of the various groups and that Groups 1 and 2 constitute 83 to 85 per cent. of all human bloods. There is a slight margin of error in the testing due to occasional weakness in agglutinins or agglutino-gens in individual bloods, and this is accordingly found in Groups 3 and 2.

Studies in normal isohemagglutinins and isohemolysins at first possessed only biologic and immunologic interest, but the recent revival of blood transfusion has demonstrated their clinical value. Accidents in transfusion are largely concerned or associated with the phenomenon of hemolysis. The occasional serious and fatal results which previously and immediately followed blood transfusions were in nearly every instance associated with evidences of active hemolysis in the patient. Whether hemolysis is always preceded by or essentially affiliated with hemagglutination does not seem to have been determined. The general consensus of opinion favors the view that while hemolysis is assuredly dangerous to the patient, the question of danger from hemagglutination through thrombosis or embolism remains as yet unproven. Neither the mechanism of the combined or independent dangers of hemolysins and agglutinins has therefore been satisfactorily elucidated though the reality of the danger is unquestioned.

Fortunately this lack of knowledge offers no obstacle to a practical solution of the problem. It has been clearly shown that the accidents of transfusion do not occur if the patient is injected from a donor of the same blood group, for the bloods of the same group do not agglutinate or hemolyze each other. In practice, therefore, it is not essential to know whether the danger is from the hemagglutinins, the hemolysins or both; it is only necessary to eliminate these factors by employing compatible blood. This, theoretically, involves the testing and grouping of the donor's and donee's blood for hemolysins and hemagglutinins. The test for hemagglutinins, as will be shown, is extremely simple, while that for hemolysins is a little more difficult and time-consuming. But, as Moss has shown, in view of certain facts the direct test for hemolysins is entirely unnecessary. The facts are these. The four recognized blood groups have as a basis the way in which they interagglutinate, *i. e.*, they are grouped according to the agglutination reaction. They are likewise unavoidably based on the way they interhemolyze for the reason that the isohemolysins in their occurrence parallel the isohemagglutinins and the groups and group reaction of hemolysins are identical with those of the agglutinins with one vital exception. This exception is the constancy of the hemagglutinins and the inconstancy of the hemolysins. Thus while isoagglutinins or isoagglutinogens are present and demonstrable, with very rare exceptions, in nearly every human blood, the isohemolysins are present or active in only about 25 per cent. of adult human beings.

And while hemolysins, when present, follow the same groups as the agglutinins, they are oftener absent or latent than present. Therefore as Brem, quoting Moss, points out, isoagglutinins are always present with isohemolysins but the contrary is not true and isohemolysins are not always present with isohemagglutinins. "Isohemolysins cannot, therefore, be used in determining blood groups." On the other hand, the possible presence and class of the hemolysin may be accurately deduced from the agglutination tests. The simple agglutination tests are consequently at the same time inferential tests for hemolysins and all that are necessary to assure compatible blood.

Compatible bloods in the transfusion sense, are those which will mix, *in vivo*, without producing any untoward effects. This is absolute when the donor and donee are both of

the same group and it is highly desirable to match individuals in this way whenever blood transfusion is to be performed. It is, however, sometimes difficult to accomplish this when donors are few or when the class of the recipient is a rare one as in Groups 3 and 4. The situation is somewhat relieved by the frequently confirmed clinical observation that a donor whose red cells are not clumped by the recipient's serum is suitable even though the patient's cells may be agglutinated by the donor's serum. Thus a Group 1 donor will serve for Groups 2, 3 and 4, in addition to his own group. A Group 1 recipient requires his own group as a donor. Groups 2 and 3 may act as donors for their own group or Group 4; as recipients they may be transfused from their own group or Group 1. A Group 4 donor can only serve his own group but as a recipient may receive blood from his own or any of the other groups. Group 1, as Vincent mentions, are, therefore, termed universal donors and Group 4 universal recipients. But in spite of these possibilities, transfusion between members of the same group is decidedly more desirable.

There remains for discussion the method by which the suitability of a blood for transfusion purposes may be ascertained. This may be done directly or indirectly. In the direct test, the serum and red cells of the patient and successive donors are matched against each other until agglutination is absent in both donor and donee, or until a donor's cells remain unclumped by the patient's serum. In the indirect test, the class of the patient is ascertained from known blood groups and a suitable donor selected from available lists usually kept in a hospital or laboratory. In the direct test, the group is not ascertained; we simply assure the compatibility of the bloods of donor and donee. In the indirect test, the group of the patient is ascertained for the permanent record and the donor selected on the group basis; this is the preferred or hospital procedure. The increasing frequency of blood transfusion has led to the publication of many methods, more or less special, but all essentially based on the principles already stated. Without going into tiresome and confusing details of various methods, two procedures may be outlined to meet, say, the following typical case: A patient following massive hemorrhages is in a state of extreme secondary anemia and requires blood transfusion. The patient may live in the country districts or a small town with no hospital (suitable for Procedure No. 1); or he

may be a patient in the ward of a large city hospital (suitable for Procedure No. 2.)

Procedure No. 1. The physician goes to the patient's house equipped with microscope, slide and cover glasses, 1.2 per cent. sodium citrate solution, capillary pipets, Wright's capsules, small test tubes and possibly a 1 or 2 cc. glass syringe. An available donor is usually found among three or four volunteers, friends or kinsmen of the patient. Sufficient blood may be collected from patient and prospective donors by tapping the ear or finger, allowing a few drops of blood to fall into a centimeter or less of citrate solution in a small test tube and then filling a Wright's capsule with blood. Or blood may be obtained with a 1 or 2 cc. syringe from a small vein. After the blood clots in the capsule, a drop of serum from the patient is mixed with a drop of citrated blood from the donor on a slide and a cover glass dropped over it. A second slide is prepared with a drop of serum from the donor and a drop of citrated blood from the patient. It is not actually necessary to use a cover glass. The slides may be observed with the naked eye and with the low power of the microscope, preferably the latter. No incubation is necessary and if agglutination occurs, it nearly always takes place within fifteen minutes and frequently in a couple of minutes. This process is gone through with successive donors until one is found in which there is no agglutination in either slide. Such bloods are of the same group (though the actual group is not ascertained) and are perfectly compatible. In lieu of such a desirable donor, an acceptable donor would be an individual whose red cell emulsion was not clumped by the patient's serum. Finally, we may go to the patient and transfuse without preliminary agglutination tests by taking along a known Group 1 donor, for as the red cells of this group are not agglutinated by any other group, the donor would be at least acceptable.

Procedure No. 2. This method is based on the observation of Moss that the blood group of any individual may be ascertained by testing his corpuscles against Group 2 and 3 serums or by testing his serum against Groups 2 and 3 red cells. As serums are much more easily preserved than red cell suspensions, it is customary to keep in hospitals or clinical laboratories small test tubes of known blood serums of known Groups 2 and 3. These should have been shown by previous tests to contain strong agglutinins of their respective groups as oc-

asionally individual serums, notably Group 3, are weak in these respects. The group of the patient is then ascertained with the greatest ease by taking but a few drops of blood in a centimeter of 1.2 per cent. sodium citrate, placing a drop of this suspension at either end of a slide and adding to each drop a drop from Group 2 and Group 3 serum respectively. The mixtures are then observed precisely as outlined in Procedure No. 1. The proper donor is now selected from hospital lists. Or in the instance of volunteer donors or unknown groups, the class is quickly ascertained by the same procedure and the availability decided on. This method involves only the taking of a few drops of whole blood from the patient and avoids the annoyance and trouble of taking larger amounts (necessary for securing serum) from weak and anemic subjects. It is, therefore, the method of choice. It really is a slight modification of those of Moss and Vincent. The general principles and details of the method are stated with conciseness and great clearness by Vincent in a recent article. Sanford, at the same time, points out that serum may be dried on cover slips and used in the same way as wet serum—the isophemagglutinin is not injured by drying. In these tests, if there is no clumping of red cells by Serums 2 or 3, the unknown is Group 1. If there is no clumping by Serum 2 but clumping by Serum 3, the Group is 2. If there is no clumping by Serum 2 and none by Serum 3, the unknown is Group 3. And if there is agglutination by both serums, the tested blood is Group 4. Reference to the table and the action of the various groups will make clear the accuracy of these deductions.

Our own work in this field simply consisted in the classification, according to isohemagglutinins, of the students of Hahnemann Medical College of Philadelphia, who without exception volunteered for this purpose. Our objects were a confirmatory estimate of the relative percentages of the various groups and the preparation of a group list of possible donors for blood transfusions. We have already availed ourselves of the latter advantage. In this study we obtained from each student by venipuncture a small amount of blood in a centrifuge tube. A few drops of this was immediately added to a centimeter of citrate solution and the remainder centrifuged to secure the clear serum. Cross determinations were then made of the serum and cell suspension with one or more serums and cells of known Groups 2 and 3. The work showed

the constancy of isohemagglutinins and agglutinogens and classification was established without the slightest difficulty with but several exceptions where the blood was weak in certain agglutinins. The proper group of these doubtful cases, however, was soon ascertained by further testing with serums or cells of the same and other groups. In our classification of 163 students, we found, as already stated, the relative frequency of the groups as follows:

| | |
|---------------|-------|
| Group 1 | 29.3% |
| Group 2 | 42.9% |
| Group 3 | 12.9% |
| Group 4 | 4.9% |

SUMMARY.—The suitability, for transfusion purposes, of one human blood for another depends on the presence of isohemagglutinins and isohemolysins, which are permanent for the individual and present alike in health and disease. Incompatible blood, may, through these bodies, cause grave or fatal results. According to their distribution, isoagglutinins and isohemolysins are divided, by clumping and hemolytic tests, into four groups. The determination of the group is practically made through the isohemagglutinins which are constant in contrast to the isohemolysins which are irregular and present in only 25 per cent. of human bloods. The testing of 163 students for hemagglutinins gave approximately the following relative frequency of the various blood groups: Group 1, 39 per cent.; Group 2, 43 per cent.; Group 3, 13 per cent.; Group 4, 5 per cent. The test for compatible blood is done directly by matching blood of donor and donee against each other; or indirectly by establishing the blood group of each. Simple methods for each are described. Bloods are absolutely compatible when of the same group. They are practically compatible when the patient's serum does not clump the donor's cells. On this account, Group 1 has been termed the universal donor, as in an emergency such an individual may be safely used for his own or any other group.

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PENNSYLVANIA'S PROGRAM IN CONTROLLING VENEREAL DISEASES.*

BY

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THE Department of Health of the Commonwealth of Pennsylvania has realized, almost since the time of its organization in 1905, the importance of taking steps toward the more general care and control of venereal diseases in the State, and has had always under deliberation the various ways and means for the accomplishment of this purpose, putting gradually into practice those measures which could be applied from time to time to so delicate a public health question with only beneficial results.

A campaign against venereal disease, conducted by a public health service, should include the following considerations:

1. The establishment of a venereal or genito-urinary bureau.
2. The organization of laboratory facilities rendering generally available, reliable means for accurate diagnosis and therapeutic control.
3. The institution of facilities, easily accessible to all, for the most complete care and rapid cure of venereal infections; venereal or genito-urinary dispensaries and hospitals.
4. Education and publicity: Measures aiming to instruct the general public as to the true nature and significance of the venereal infections, and to direct, both immediately, and

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through the profession and other channels toward their proper care, cure and prevention.

5. Social control of infectious cases; reporting and quarantining of venereal cases.

6. Preventive Measures: Not essentially included under the foregoing headings. Elimination of sexual vice, segregation and government control of prostitution, etc.

In 1905 the Department of Health established a State laboratory and placed the laboratory advantages in the diagnosis of gonococcus infections at the disposal of the physicians of the Commonwealth. Thousands of smear preparations and bacteriologic studies were undertaken. With each advance in science along these lines new facilities for the diagnosis and control of venereal diseases were added. Smears from sores and mucous surfaces were examined for the presence of the *treponema pallidum* on the establishment of this organism as the causative agent of syphilis, enabling the department to be of assistance to physicians in confirming or establishing a diagnosis in many cases. After conducting experiments on the shipping of specimens of blood considerable distances, it was determined in April, 1915, to offer the use of the laboratory to physicians for the performance of the Wassermann reaction. The importance of this work in diagnosis and control of syphilis resulted in rapid and tremendous growth so that more than six thousand such tests were performed during the year 1917.

Early in 1916, the question of attacking the venereal problem clinically was discussed by the department. It was decided to equip and open to the public an experimental genito-urinary dispensary, to determine practically the success and the need of a comprehensive system of such dispensaries throughout the State. This first State dispensary was opened in August, 1916, in Philadelphia, in the building devoted to our tuberculosis dispensary service at 1630 Poplar street. It proved this far successful that, in a city where there were already forty-one established dispensaries for the care of venereal diseases, with no spirit of competition but in co-operation with these dispensaries and with little or no publicity and no salvarsan, the dispensary in one and a half years was caring for over 200 active cases.

In December, 1917, the division for genito-urinary diseases was definitely established in the department and a chief

appointed. It was further decided to extend the establishment of State genito-urinary dispensaries throughout the Commonwealth. The second dispensary was opened in Reading in February of this year, the third in Harrisburg in June, eleven more were opened in August, in Williamsport, Wilkes-Barre, York, Lancaster, Altoona, Allentown, Sunbury, Scranton, South Bethlehem, Pittsburgh and Shamokin. Five more have been opened this month in New Castle, Sharon, Lebanon, Johnstown and Pottsville, while the five in Butler, Greensburg, Erie, Easton and Oil City are about in readiness for operation. Before the end of September a total of at least thirty dispensaries should be in operation. In the dispensaries now open to the public there had been treated, up to September 1st, 653 patients with a total number of visits of 3,459. Of this number about 80 per cent. were venereal cases.

The work of equipping these dispensaries was, at first, rather difficult due to the scarcity of drugs and surgical material resulting from the great drain on these supplies for the army and the interference, in some instances, with their source through war conditions. Each dispensary is equipped both with drugs and surgical instruments and apparatus for the complete care of any venereal or genito-urinary condition within the limits of minor surgery. The dispensaries are directly in charge of local physicians chosen with the utmost care as to their fitness for this work in every respect and specially trained in the handling of genito-urinary conditions. All treatment, including the administration of arseno-benzol is given free of charge, which fact, according to our method of conducting the dispensaries, holds a double significance, first the necessity for a certain amount of discrimination and judgment as to those patients deserving of such treatment, and second, the absolute elimination of any excuse for neglect of treatment on the part of anyone suffering with venereal disease within our Commonwealth.

Before leaving the discussion of the purely clinical attack in our campaign against venereal diseases, it is opportune to mention that the State Department of Health has been far from alone in its efforts. Most valuable aid in this respect has been rendered us and great work been accomplished for the State by the unceasing and well-directed efforts of the State Board of Medical Education and Licensure, bringing about by education, where possible, and just force, where necessary, a change of attitude of the conduct of our hospitals

toward this important question. Allow the brief summary of the result of their work to speak for itself.

Of 174 hospitals in Pennsylvania receiving State aid, 156 admit venereal diseases, with a total of 1,031 beds available for ward cases needing treatment for these affections; 79 hospitals are conducting dispensaries for the free treatment of venereal diseases, 149 have laboratory facilities for the study of smear preparations and 118 for the performance of Wassermann reactions and 136 are equipped for the intravenous administration of the newer remedies for syphilis. One hundred and forty-eight have expressed their willingness to receive cases from the State Department of Health. The significance of this state of affairs toward the handling of possible major surgical and ward cases coming under our care in the dispensaries is evident, as well as the immense benefit derived by the Commonwealth from the prompt and efficient treatment of patients, suffering with venereal diseases, in hospitals and dispensaries already well established, where during the year 1917, 11,605 cases of venereal disease received treatment.

In the discussion of the further measures adopted by the State Department of Health on its program in controlling venereal diseases, attention should be called to the fact that, in many instances, these measures have a multiple significance in relation to the various headings given under a "Campaign Against Venereal Disease;" in their practical application, education, publicity, social control and prevention are very closely related.

As an educational and publicity measure the department maintains a traveling exhibit, illustrating all public health measures, at the week stands of which, in ever-changing localities, carefully prepared and timely lectures on health problems are delivered to public audiences, social, sexual and therefore venereal discourses playing a considerable part. Placards containing elementary instruction on venereal diseases and specific direction for their control are being prepared for posting in all places of public accommodation. On the opening of each dispensary letters of announcement, with a statement of the purpose of the dispensary are sent out to all the physicians of the county in which it is placed. Likewise, the announcement, with the address and hours of the dispensary is published in all the local newspapers. A series of articles on public health questions, including the venereal, with especial applica-

tion to the educational needs of our coming soldiers are appearing in the newspapers.

The promiscuous distribution of educational pamphlets on sexual and venereal problems is a measure that has not been adopted by the department in Pennsylvania because it believes that such procedure is not only well nigh useless from an educational standpoint, but harmful on account of the necessary lessening of the seriousness of the subjects, due to the promiscuity of effort and the probability of the consequent falling of such literature into the hands of persons to whom it can be of no possible benefit but most likely harm.

Under the heading of social control, Pennsylvania has not adopted any regulations for the general reporting and quarantining of venereal cases, for reasons almost too numerous to state in this article but which, after serious deliberation seemed good and sufficient. May the following comprehensive statement suffice: So long as the general public views venereal diseases as manifestations of immorality and not as simple infections and communicable diseases, such a regulation, in a civil community, would defeat the very purpose for which we are striving—the practical control and elimination as far as possible of venereal diseases. Further education and other important measures must be first accomplished.

To each venereal case attending our dispensaries, the hospital dispensaries or the office of a private physician, however, is presented a card setting forth plainly the rules which he or she must observe in their conduct during the infectious stage of the disease, and on the reverse side the penalty for breaking any of those rules, which is the placing of such person under absolute quarantine for any time determinable by the physician in charge of such case. Such a quarantine law gives absolute control over the patient after he or she has voluntarily come under the supervision of the medical authority.

Along this line, moreover, we are soliciting, with a considerable degree of success, through personal letters and interviews, the closest co-operation of the charitable organizations and societies and especially the municipal courts likely to come into contact with persons infected with venereal disease; placing at their disposal the State genito-urinary dispensaries as a means for diagnosis and treatment. On such cases interval reports are made to the referring court on the progress and attendance of the case over which, as a consequence, is kept a

constant police surveillance with absolute control when necessary.

Cards of reference, giving the address and hours of the nearest State dispensary are being sent to all physicians, hospitals, societies and institutions of charity and the above mentioned municipal courts.

With this apparently lengthy but, in fact, brief summary of what has been accomplished, in its program in controlling venereal diseases, it may be said, with truth if not modesty, that Pennsylvania stands well to the fore in this important movement.

A CONSTRUCTIVE PROGRAM OF SEX CONTROL.

BY

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RECENTLY, a theological professor friend of mine said to me. "This sex problem is the biggest problem on earth. One of these days we are going to settle that other question between capital and labor: it is easy when compared to this one. But this sex question, I don't know how to solve it, and what is more, I don't believe anyone else does!" I believe we will all agree with the professor, at least in about the same proportion as we have studied the problem.

Nevertheless, the question is one that touches life so intimately and on so many sides, that we cannot get away from it. You men of the medical profession are daily driven up against the inroads on sex vices on health. The pastor finds their curse in morals. The educator finds their blight on promising youthful careers. In civics it looms large as provocative of all kinds of crime, as a fertile source of political corruption, as an economic weight on the entire community. It is a problem we cannot escape.

That it is not a hopeless problem, however, is indicated by the results of the efforts of recent years, in which scientific investigations have been made in many places and along vari-

ous lines. These have resulted in considerable progress, particularly in the way of disclosing the nature of our problem and suggesting something of the main lines along which constructive program should be built. It is something that we have come to see the many-sidedness of the problem. We have learned that it is not merely a medical program, not merely an ethical problem, that it is both of these and that it is also a psychological problem and a sociological problem. That means that our program, if it is to be effective, must involve the co-operation of agencies working along all these lines.

It is probably most of all a sociological problem, for the reason that it is primarily one of establishing wholesome human relationships relative to one of the three primal animal impulses, food, shelter, sex. The sociologist has at least had much to do with starting us in the right direction. He called our attention to the fact that most of our efforts had been along corrective lines. We had proceeded through medicine to try to rid ourselves of the diseases resultant from vice, and through religion to try to convert the depraved sinner from the error of her, or his, ways, but we had not sought out the social sources out of which came the vice, the diseases and the depravity. What we had done along social lines, had ordinarily concerned itself with prostitution alone and tried to suppress it. But prostitution is never alone, and suppression is never the final word in a scientific policy of dealing with anything. What is merely suppressed is always a danger. Dragons held under foot must always be held watchfully. Every man of scientific training knows that no evil finally disappears till its causes have been discovered and the natural forces on which it drew, have been turned into channels of wholesome outgo. You medical men have taught us to stop taking headache powders, and to seek to get rid of the headache's cause, but in social policies, we have ordinarily gone right on just hunting something to stop the ache. It marks a very distinctive advance, therefore, that we are now seeking out the causes of sex vices with a view to their elimination, and with a view also to affording normal and wholesome expression for whatever in human nature they have been able to divert into destructive channels.

Modern psychology has also been making an important contribution, particularly in the way of throwing light on the nature of the sex impulse. Over against the old asceticism that

conceived of sex activity as itself degrading and even immoral, modern psychology teaches that sexual intercourse is the natural and normal expression of affection between the sexes, and that this is just as original to it, as is its part in reproduction. It teaches that being natural and normal, it is neither moral nor immoral in itself. Far from being merely a provision of nature for securing reproduction, we are now taught that the best results in reproduction depend on affection.

The same science goes further, and shows that different people are constituted differently in the amount of their sex impulses, just as they are in their aesthetic temperament or their stature or any other mental or physical characteristic. There are people by nature high-sexed, and there are people by nature low-sexed, and neither characteristic is to anyone's particular credit or discredit. There is no superior moral value in either. Therefore, let not him that is high-sexed despise him that is not, and let not him that is not high-sexed judge him that is, for doubtless God hath accepted him.

All this, of course, runs counter to much that has been taught in some of our traditional ethics. In considering the question from the ethical standpoint, it is to be remembered that vices are ordinarily perverted virtues. They are the result of normal forces being turned into wrong channels. Even Satan was a fallen angel. Often this perversion comes because these forces have not been permitted normal expression. Applied to the sex problem, this means that vice obtains wherever sex indulgence is entered into otherwise than as the supreme expression of affection between two people absolutely devoted to each other. This applies not only to promiscuous intercourse sought for mere sense gratification, it applies also to marriage sought without affection. It means that a man who marries "to get a housekeeper," is on the same moral footing in so doing, as the old-time Roman who bought a female slave. It means that the woman who marries for money, for social position, or merely to get a home, virtually prostitutes herself. All these are essentially vicious, and it is not surprising that out of their practice come many recruits of baser forms of vice. Sex prostitution is so much more abhorrent to us than prostitution of other things, such as one's position or influence or power, just because the thing perverted is so intimate to much that is best and most valued in life.

Another contribution made by a combination of psychological and sociological investigation, and which is important as indicating the lines a constructive program must take, is the part played by psychic factors in the development of sex vices, especially the unnatural vices. Many extended studies have shown that unnatural vices are commonly the accompaniments of feeble-mindedness, sometimes as cause, usually as result, some cases have entailed on syphilitic or other venereal infection, and practically all the rest have come from suggestion to immature minds by vicious associates. In other words, the cause of unnatural vice is ordinarily psychic.

Among prostitutes, mental subnormality is so prevalent as to figure very largely as a cause. Along with Frederick A. Rhodes, M. D., of this city, I made a study a few years ago, of the case of 506 prostitutes whose life stories we obtained. To these I have since added a number of others. We found these women came from all classes of society pretty much in proportion to the number of people in each class, though there was a notably small proportion from good religious homes, and a large proportion from among the poor and ignorant and where home conditions were bad. We found the great majority of these girls and women mentally subnormal, generally middle grade and low grade morons. The occasion of their start downward was usually some misfortune or bad situation to which their weak moral resistance was unequal. Economic factors entered largely, but few sold their virtue for bread. A recently published study by George J. Kneeland, of the Bureau of Social Hygiene (*Light*, August, 1917), which covers 129,230 cases, of which 4,278 were studied intimately, come to practically the same conclusions. He finds they were "generally weak, vain, ignorant, easily led."

A study of the experience of recent years in the suppression of vice has made another important contribution in the distinction found between vice and the traffic in vice, which is a very different thing. Vice obtains wherever a lewd man and woman engage in sex practices contrary to good morals, but the traffic in vice is what is found where such proceedings are promoted, particularly by third parties, for financial gain. This distinction is important, partly because it shows that in prostitution we have really two problems to be dealt with in two ways in our program, and partly because it reveals in the traffic itself another contributory cause of vice. People who profit

financially from vice, naturally promote its practice for the profits. This is one of the strongest counts against the maintenance of a red light district. Numerous investigations have shown that every red light district is concerned more with creating a demand, than with meeting a demand that already exists. Not only is this to be seen in the work of the panderer, the pimp, the solicitor, but also in the part played by drinks, music and shows. That these last are strong factors, making for vice, was shown in the work of the Morals Efficiency Commission in this city six years ago. There was a red light district here at that time, and they succeeded in having drinks, music and shows eliminated. The result was a falling off in patronage of the houses of as much as 90 per cent. Manifestly the red light district was not concerned solely with catering to a demand already existing, for in that case no attraction would be needed except the prostitutes themselves, and they still remained. The fact that these other attractions are so universally used, shows how the traffic is concerned with the promotion of vice, and therein is itself a contributing cause.

There is still one more factor in the problem, which is to be considered preliminary to outlining a constructive program, that is the character of the patronage of vice resorts. Investigations we made in this city in former years when the red light districts were permitted, showed that comparatively few of the patrons were unmarried men of mature years. Fully 90 per cent. were married men and boys from the middle teens to the early twenties. This fact raised two questions:

First, why do boys go wrong? Rather extended study showed two reasons: One is the spirit of adventure that leads a boy to seek the thing that is taboo, and for the very reason that it is taboo. The old-fashioned policy of silence on sex matters, had only taught him that there was something there he should neither know nor touch, and that was sufficient reason many a boy decided he would do both. The other old-fashioned notion among those of less strict morals, that every boy had to have his "fling" before he could become a full-fledged man, helped on. We found that boys went in gangs down the line, primarily to see the sights. Many of them went with no purpose of sex indulgence, but were persuaded into it after they arrived. Those who went from sheer desire to gratify the

sex impulse were generally older boys in their twenties for whom deferred marriage was pleaded in excuse.

The other question was: Why do married men go wrong? In nearly all cases investigated, this was found to be ascribed to unhappy conditions at home. In some cases there were mismatched couples, physically and psychically, in others there was lack of affection at home, in many cases the husband pleaded in excuse that his wife was afraid of pregnancy. A very few pleaded ill-health of their wives as an excuse for seeking indulgence elsewhere.

Coming now directly to the question of program, it is evident that the mere statement of these findings resultant from the experience of recent years, is itself suggestive of what is to be done. It is manifest at once that our program must be a broadly co-operative one, a program involving the work of educational, moral, medical and civic forces, co-operating along broadly social lines. It must be a program that will strive to eliminate the destructive forces making for vice, and at the same time undertake to promote those normal relationships that will make for wholesome sexual expression. These may be briefly enumerated as follows:

1. The abolition of the traffic in vice. This is in line with efforts in the past, differing, however, in that it does not expect thereby to eliminate vice itself, but to remove one of its contributing causes. I am aware that segregation has often been advocated as a means of restricting vice, but I am also aware that the uniform experience of those that have dealt with the problem first hand in a large way, is against it. Several commissions in various cities within the last ten years, have begun their work believing in segregation, and so far as I can find, everyone of them ended by opposing it. Flexner, in his great study of "Prostitution in Europe," where segregation has been tried for centuries, found in 1914 that there was not, "from Glasgow to Budapest" a single authority that advocated segregation. All agreed that it utterly failed to segregate and only made for the increase of the evil.

In this connection, it is to be noted that the distinction drawn between vice and the traffic in vice, makes plain also what we have a right to expect and what we have no right to demand of the civil authorities in the carrying out of our program. We have a right to demand, as is now being done in most cities, that the civil authorities shall abolish the traffic,

because that is a civic matter, but we have no right to demand that these authorities eliminate vice itself, because that is a matter of morals and to be dealt with by moral and religious agencies.

2. The restraint and treatment of confirmed prostitutes, comes as a necessary corollary to the abolition of the traffic. Experience shows that the abandoned woman of the street has suffered such a moral breakdown that her rehabilitation will of necessity be a process covering a considerable period of time. The head of one of our best reformatory agencies in this city, a religious institution of pronounced evangelical type, stated a little while ago, that during a period of some five years in which he had been in charge, nearly nine-tenths of the prostitutes they had received, went back into the old life. The trouble was that this institution was able to keep them but a few days or weeks, which did not afford time for either physical treatment or moral strengthening. The new institution this State will soon have available at Muncy gives promise of affording a fine start in this direction.

3. The placing of pronounced subnormals under necessary restraints. Feeble-minded women should be confined during child-bearing years, and varying degrees of restraint are desirable for higher grade subnormals. Pennsylvania made a fine start in the right direction six years ago, when the village for feeble-minded women of child-bearing age, was founded. Unfortunately, the two following legislatures have failed to make any appropriation to complete the plant, so that it is not yet available. No doubt a bill will be introduced in the next legislature providing the necessary appropriation, and it certainly behooves every forward-looking citizen to support it.

4. The proper instruction of the young. There can be no question that where this is given it goes far in the restraint of vice. It gratifies the boy's curiosity and keeps him from practices into which many have fallen through ignorance. It fortifies girls against starting wrong in comparative ignorance of what is involved, and, what is certainly of equal importance, it warns them against the tragedy of marrying a man afflicted with venereal disease. Parents should be encouraged to give this instruction, but as a matter of fact, many of them will not do it. Some are incapable of doing so with any effectiveness. The assistance of other agencies will, therefore, be found necessary.

An experience of my own is in point right here. I was once the pastor of a church in an industrial community for a number of years. For a period of ten years, I made a practice of quietly calling together the boys of my church for a frank talk. Then I did the same with my girls. This I did about once a year. The result was that, while when I began there was a good deal of venereal disease among the older boys in the Sunday School, when I left that church, there were about 185 young people who had come up under that training. Aside from some who had been spoiled before I got them, I can count on my fingers all of those boys who ever went down the line, and not one of those girls ever got into trouble. All of these girls know also what it will mean to them if they marry a venereally infected men. Frequently I have been asked how they are to find out. I always tell them to have their fathers find out. If this cannot be done, then I counsel them to ask their family physician. I am aware that the ethics of the medical profession properly forbid a physician to reveal professional knowledge about his patients, but I know also that every physician knows so well what it means to a pure girl, that I am sure there are few of them who would not see to it that in some way the proper information was secured.

5. All the items thus far mentioned are important and have place in a constructive program, but we must not deceive ourselves into expecting that they will be sufficient. After all, they are largely restrictive and corrective. They do not provide for that normal sex expression that will have a place in any program that is hoped to be largely effective. This, of course, means a more normal and wholesome married life. It means the encouragement of early marriage. It means encouraging the mating of mutually adapted couples. It means a revival of romantic love. It means also, I believe, under some proper restrictions, birth control.

I realize that the mere mention of these proposals suggests great difficulties in carrying them out. And yet many of these difficulties are not as great as they seem. Take, for example, the matter of securing the marriage of couples that are physically as well as otherwise adapted for each other. Ordinarily nature will take care of that, if only people are informed concerning the suffering such mismating often incurs, and if marriage is kept on a high romantic plane. Mismatings come usually because people marry, not for love, but

for money, for position, at the direction of ambitious mothers. As to early marriage the chief obstacle is economic, young people deferring it till they can see their way clear to provide financially, particularly for the coming of children. If they felt able to control this last, unquestionably there would be more early marriages.

Yet the mere mention of birth control means the springing of pronounced objections. We are told that it will make for illicit relations, that under it selfish people will have no children at all, and that it invites married life to become an orgy of sensuousness. On the other hand, there can be no doubt that under it there would be far more early marriages, far fewer divorces, far less prostitution. As to the objections just mentioned, it is to be said in answer to the charge that it will make for illicit intercourse, that most immorally inclined people have no difficulty securing the desired information now. Moreover, virtue that rests on fear is not virtue at all, and ignorance never protected anything good. As to the fear that such knowledge would make for degrading over-indulgence, it is replied that it has not so resulted among the people who do possess it now, and that such evils are largely self-corrective except among the depraved types who are not restrained by anything, and who—they are usually men—under present conditions, are by swiftly repeated conceptions, multiplying tragedies.

The only final appraisal of birth control that can be made, is that resting on experience in the countries that have tried it. The outstanding example of this is Holland, where since 1881, it has been encouraged in government clinics maintained for the purpose. Dr. Knopf has shown, (*Survey*, Nov. 18, 1916), that during that time there has been a decrease of 25 per cent. in the gross birthrate, but a decrease of 66 per cent. in the infantile deathrate, thus leaving an actual increase in the number of children reared. What is more, during this period of Dutch history, the military statistics of Holland show that the number of men averaging over 5 feet, 7 inches in height, has doubled, and the number under 5 feet 2½ inches has decreased 66 per cent. He shows that in the countries where the method has been tried, there has not been a large development of any of the evils feared. Unquestionably things as they now are leave much to be desired. Those immorally inclined do secure the knowledge desired, and among the more educated

classes birth control is practiced, so that as a result we are having most of our largest families among the least desirable groups, thus making for the survival of the least fit. Unquestionably we do need to wrestle with this question till we arrive at a policy which, duly safeguarding against the grosser evils feared, will at least enable you physicians to give information in those cases where its lack means tragedy and greater incentives to vice.

Summarizing this perhaps too long, but still only cursory, survey of the present-day problem of sex control, we find a situation that is still perplexing, but not discouraging. The problem is unquestionably intricate, and no one has yet found a complete solution. But much progress has been made, particularly in analyzing the problem and in finding how some of the evils can be removed, and how such sex relations can be encouraged as shall make for the real enrichment of life. Doubtless as we move forward along the lines of such a constructive program, increasing experience will show still further steps to be taken. It is important, however, that the different workers in the several fields of medicine, moral reform, and civic and social endeavor, shall keep in mind their mutual dependance on each other, and work together toward a common end, a state of society where sexual intercourse shall not be found except as the supreme expression of pure love, and where offspring shall be sought as the product of holy union.

THE INTRAVENOUS INJECTION OF ARSENOBENZOL IN CONCENTRATED SOLUTION.—Faire and Marsia (*Presse Medical*), say that they have given 3,150 injections of neosalvarsan or novarsenobenzol Billon, dissolved in an amount of water never exceeding 2 c.c. They found that novarsenobenzol dissolved very quickly by the addition of the water to the drug contained in the ampoule and gently shaking it until completely dissolved. Neosalvarsan did not dissolve so readily and they advise that care should be taken to distribute the neosalvarsan in a thin layer over the lateral walls of the ampoule by tilting the ampoule and gently rotating it. This simple manipulation prevents the formation of a semisolid mass at the bottom of the ampoule and allows the drug to go easily into solution. Distilled water was usually used to make the solution, but when it was not available, boiled filtered water was used without producing any untoward reaction. The authors state that the concentrated solution is perfectly well borne and they have not observed any vein irritation produced by the injections. Inflammatory induration has occurred due to leakage from the vessel into the surrounding cellular tissues but is not more marked than that occurring from much more dilute solutions. General reactions were usually not observed; in a few instances very mild general reactions followed the injections.—*Charlotte Medical Journal*.

EDITORIAL

HAHNEMANN COLLEGE NOW UNDER GOVERNMENTAL MILITARY SUPERVISION.

THE Alumni of the Hahnemann Medical College of Philadelphia will be interested to know that the Government has made "Old Hahnemann" one of the units of the Students' Army Training Corps. This means that the medical and military instruction in the College is now conducted under Governmental supervision. The military affairs of the unit are under the control of Colonel John A. Lockwood, an officer of the United States Army, assisted by three junior officers. The medical teaching will be carried on by the former teaching staff under the supervision of the Surgeon General's Office at Washington.

All students who are physically and mentally qualified have been enrolled in the Students' Army Training Corps, and will be provided by the Government with uniforms, housing, board, tuition and \$30 per month pay.

Already the beneficial effects of military discipline and training are beginning to manifest themselves in the student body, and it is believed that the efficiency of the institution and of the individual men will be much improved under the military system. Under the present arrangement the Government has provided for the continuation of this work until July 1, 1918, but there is a strong probability that it may be made a permanent policy of the Government, especially if universal military training should be adopted after the war. G. H. W.

THE EPIDEMIC OF INFLUENZA.

THE influenza epidemic will cause the Fall of 1918 to be long remembered in medical literature. It is probable that never within the memory of physicians now living has such a wide-spread and fatal epidemic of disease occurred. Not

only have a large proportion of the inhabitants of our large cities been affected, but every village and hamlet has contributed its full share of the sick and of the dead. We can appreciate the fatal character of this malady when we are informed by official figures that as many persons died in Philadelphia from pneumonia and influenza in two weeks as were killed in action in the American army in France in a whole year.

The nature of the micro-organism causing the present epidemic, and particularly the type of organism or organisms that are responsible for the fatal cases of pneumonia, has not yet been clearly decided. The influenza bacillus has been found in quite a large proportion of cases, but bacteriologists are by no means agreed that this organism is responsible for the fatal cases. Most of the cases complicated by pneumonia have in their sputum pneumococci and a strain of hemolytic streptococci. There seem to be many reasons for believing that the extreme prostration and the profound toxemia present in the majority of cases that ultimately prove fatal are due to the action of the hemolytic streptococci.

Efforts have been made by some to place the responsibility of the present epidemic upon the shoulders of German spies, but such ideas are mere presumptions based upon no authentic evidence; as a matter of fact, the disease is quite as prevalent in Germany as it is in the United States, and the disease has in the main spread along the same lines as the great epidemic of 1890.

It is a great satisfaction to homœopathists to know that the homœopathic method of prescribing has proven eminently more successful than the empirical method of treatment in vogue among the members of the dominant school of medicine. Acetanilid, aspirin and other similar products, while temporarily relieving the pain, tend to impair to a serious degree the immunizing powers of the body, and result not only in the prolongation of the malady, but in the development of many complications. Serums and vaccines of various kinds have been advocated, but their use, according to the reports of official commissions appointed for the purpose of investigating their therapeutic value, has been followed by no beneficial results whatever.

Our observation has been that the vast majority of cases of influenza that have been placed under proper hygienic care and have received the indicated homœopathic remedy have

made a satisfactory recovery within a comparatively few days. A layman, with whom the writer was talking a few days ago, stated that the difference in the mortality rate in his own village between the patients who received homœopathic and those who received "old school" treatment was so obvious that it was commented upon by the entire community.

The death rate from pneumonia was exceedingly high under all forms of treatment and we have no data at our disposal that would permit us making any definite statement as to the relative mortality from pneumonia under homœopathic and "old school" treatment. The Editor would be glad to receive and to publish contributions from physicians throwing light upon this phase of the subject.

G. H. W.

EVERY WAR WOUND, NOT CONTAINING STREPTOCOCCI, MUST BE SUTURED. —Gross (*Bull. de l'Academie de Medecine*, No. 41, 1917, Seance 23) after an experience of several years with large incisions, then with excisions, says that surgeons at the front began to notice that certain wounds healed in so simple and natural a manner that the idea of primary suture suggested itself to them. The author claims to have been the first to practice complete closure of war wounds in the surgical automobile hospital No. 12, with varying success, but confesses that he did so without being able to base his observations on any scientific facts or to explain to himself why certain wounds cicatrized by first intention, while others, operated on under identical conditions, did not do so until about three months ago. The studies of Tissier furnished the desired information. Tissier's conclusions were that it was the anaerobes which determined the putrid infection of war wounds, but that their development depended on the presence in the wound of dead tissue and on the simultaneous presence of one or more aerobes. The extension of the gangrenous process depends on the presence of the anaerobes and the aerobes associated with them. In the serious infections, this aerobe always is the streptococcus.

The practical conclusion is: That every war wound, not infected by the streptococcus, may be united by suture, after proper surgical treatment, and ought to heal. If the bacteriological examination reveals the presence of streptococci, the sutured wound should be reopened; in every other case in which complete excision was done, it should be left alone after the patients have arrived at the hospital. The streptococcus, cultivated on a liquid medium, at 370, will give the answer in five to six hours.

Of the 759 sutures, done by Tissier's method, between July 23 and September 10, fifty days, 675 healed by first intention, 47 healed partially, and 37 were reopened after the presence of streptococcus had been shown. The successes, therefore, amounted to 88.8 per cent.

Gross concludes that primary suture constitutes the rational treatment of war wounds; that the great merit of Tissier consists in his having shown that the quality of the infecting microbe alone is of importance; that the presence of the streptococcus alone should prevent the closure of a wound or cause its being reopened. This streptococcus is met with in from 10 to 15 per cent. of war wounds of recent date; all the others should be closed.—*The Military Surgeon*, May, 1918.

GLEANINGS

THE ABORTIVE TREATMENT OF GONORRHEA IN THE MALE.—Bierhoff (*American Medicine*, March, 1918) thus describes his application of the abortive treatment of gonorrhea:

The case must not be one of first infection.

We must feel reasonably sure that we are dealing with a fresh infection.

The interval between infection and the beginning of treatment must not be too long, preferably not over one week.

The onset of the disease must not be of the virulent type.

The gonococci must, in great part, still be extracellular.

We must be prepared that some among the cases (although the percentage is, happily, small) may show themselves to be hypersensitive to the silver salts, and that, furthermore, there are others in whom, before the beginning of the treatment, the infection will have extended to and have involved the urethral glands, or crypts, or the prostate. Naturally, such conditions should not be used as arguments against the abortive treatment.

If we bear the above facts in mind, we may hope to cure a large majority of the cases quickly and definitely. This is not possible, however, if we employ the astringent drugs during the gonococcal stage of the disease; for, by their use, we delay the cure by promoting the retention of the germs in the tissues.

Daily control examinations are necessary in order to judge correctly the progress of the cases and to change the treatment with reference thereto. A sufficient knowledge of microscopic technique and of the morphology of the gonococcus is, therefore, absolutely essential if one wishes to succeed with this form of treatment.

The method is applied as follows: The secretion is taken from within the urethra by means of a sterile platinum loop, and at once examined under the microscope. The patient is then instructed to pass his urine in two portions, of which the first contains all but a few drachms, the rest being passed into a second glass. Should the examination of the discharge and the inspection of the urine show that the case is one that offers us the possibility of success, then we irrigate the anterior urethra only, by means of the large hand syringe or irrigator, with 450 Cc. of $\frac{1}{2}$ -per-cent. solution of protargol. Care should be taken to avoid any violence, and the irrigating fluid is not intended to flush out the posterior urethra or bladder, although no harm results if a small quantity does find its way there. The physician then, by means of the 8-Cc. urethral syringe, demonstrates upon the patient the correct method of injecting himself, and orders him to do so every four hours, with the small syringe of $\frac{1}{2}$ -per-cent. protargol solution, containing in addition 15 per cent. of glycerin. He is ordered to urinate before making the injections, and to hold the solution for ten minutes in the urethra.

If the result is to be a positive one, then, on examination after twenty-four hours of treatment, the urethral secretion will be found to be a mere trace, and aseptic. Should the secretion be taken after injection, and before urination, it will be found aseptic, and to consist chiefly of degenerated pus

cells, with epithelia and fibrin threads. Should he now urinate, and we examine after an interval, without further injection, we shall find the sparse secretion to consist almost exclusively of epithelia, with but few degenerated pus cells. The treatment of the first day is repeated on the second. He then advises the patient to present himself, on the third day, without having injected that morning, and from two to three hours after urination. In successful cases he should now be free of discharge or gonococci, and the urethral scraping be almost exclusively epithelial.

Upon this third day the author irrigates with 300 Cc. of a $\frac{1}{4}$ -per-cent. solution and advises the patient to inject himself three times during that day. Should he be free of gonococci on the fourth day, then he omits the irrigation and the patient injects himself in the morning and evening only. Naturally, scrapings are made daily, and shreds examined if no scrapings can be obtained. On the fifth day the injections also are omitted, and the patient instructed to proceed to the alcohol test, in moderation. This is repeated daily for a week, after which, if still free of germs, he is permitted to indulge in coitus condomatus. Should this prove negative, then we are justified—according to the author's experience—in considering the case aborted; for it has been the writer's experience that, if gonococci be still present somewhere in the tissue, they will almost without exception reappear, with discharge, within forty-eight to seventy-two hours following the cessation of local treatment.

The only dietary restrictions which the author has found necessary during this treatment are the avoidance of highly spiced foods and alcoholics. Sexual excitement must, of course, also be strictly prohibited.

Should the gonococci not have entirely disappeared after forty-eight hours of treatment, then the writer considers the abortive treatment to have failed—for he cannot consider a treatment as abortive which does not rid the patient of his infection within that time. In such cases he then proceeds to the usual treatment of the disease. This differs but little, in reality, from the foregoing, excepting that we do not see the patient so often.

Should the urethral glands, paraurethral passages, or crypts be infected, then we usually notice that the germs disappear at first, to reappear on the fourth or fifth day. If the prostate be involved, we find that the gonococci persist, the second urine becomes cloudy, and we find gonococci in the prostatic secretion. In rare cases, symptoms of irritation of the urethra arise which are due to an individual idiosyncrasy of the patient to the drug in use. We may notice slight tingeing of the discharge with blood, accompanied by burning, on urination. The bleeding may, however, be more pronounced, and accompanied by slight diminution in the stream of urine. This is usually due to the preexistence of a stricture. He has also in rare instances seen an edema of the meatus, with eversion of the lips, accompanied by the free discharge of a serous or sero-sanguinolent fluid. These complications are happily of transient character, soon disappearing upon a temporary cessation of the treatment. After their disappearance we may continue the treatment with weaker solutions, and usually find that the urethra tolerates these well.

As to results, of a total of 363 cases, 63.6 per cent. were free of gonococci after forty-eight hours of treatment, and of those resulting negatively more than one-half were free within three weeks. The percentage of infections of the prostate was 6.78. Epididymitis occurred in five cases and paraurethral abscess in two.—*Therapeutic Gazette*.

MUSTARD GAS AND ITS EFFECT UPON THE SKIN.—The carrying on of modern warfare largely through the use of poisonous gases necessitates a full understanding of their nature and effect: their constitution and manufacture are matters for Government concern. Their effect upon the body tissues and the means of combating or avoiding these rests with the medical arm of Government service. Mustard gas or dichlorethylsulphide is the gas which is used in greatest quantity and produces most disastrous results; therefore this is being submitted to experimental investigation in the laboratories of the University of Michigan. Dr. Aldred Scott Warthin and Dr. Carl Vernon Weller have reported their work upon the skin lesions produced by this gas, reserving for another paper the study of the respiratory lesions and of conjunctivitis. Their experiments were made with animals and upon human material through autoapplication, amputation material with consent of the patient, and accidental chemical laboratory lesions. They had therefore opportunity to study the lesions throughout and made careful microscopic, pathological examinations, their results differing somewhat from conclusions reached a number of years ago through experimental work, and even from those reported by English and French investigators since the use of the gas in warfare.

Mustard gas proves itself an escharotic, acting upon the epidermis and tissues of the corium, particularly the endothelium of the vessels. There is great damage to the vessels in the affected area, with collapse and some local anemia. There is no hemorrhage nor thrombosis, but a distinct fluid exudation and also emigration of leucocytes. The result of this injury to the vessels with the relatively slight leucocytic demarcating infiltration probably accounts for the slow healing of the lesions. In animals there is slight hemorrhage by diapedesis. The burn is a chemical one, unlike that produced by heat or electricity, or even ordinary corrosives. It is most like that of hydrochloric acid, and, in its slow healing, resembles the injury produced by the x-ray. The necrosis proceeds very slowly, not reaching its depth for five or ten days after application. The writers explain this in part by contraction and death of the vessels, resulting in anemia in the injured area. The edema in animals was strikingly intense and deep and different from that in the human skin. In the latter, necrosis of the epidermis is usually evident in two hours and reaches no further than the papillary layer in the early stages. There is also early vesicle formation, but, in animals, this was not observed. The deep penetration of even a small quantity is another peculiar characteristic. It enters apparently through the hair follicles, sebaceous, and sweat glands. The lesions are marked also by absence of pain, probably due to the edema and degeneration of nerve endings at the site of the lesion. The intensity of the effect of the gas seems to be increased by humidity, and therefore among the soldiers lesions are usually found on the covered parts, and because of the greater moisture of these parts, more severe in the axilla, between the fingers and toes, around the genitals, and between the thighs.

These investigators refute the statement of some observers that the admixture of water increases the escharotic action. They find that if the oil, the form in which the gas is utilized, is immediately washed away, the lesion is rendered much less severe. They advocate washing within two minutes with tincture of green soap as an entirely effective preventive measure. At the most but a slight hyperemia would result. While this would be difficult

to carry out under conditions of warfare, it could be used as a preventive measure wherever the gas had to be handled, as in laboratories, factories, and munition depots.—*New York Medical Journal*.

THE CONDITIONS UNDER WHICH THE STERILIZATION OF WOUNDS BY PHYSIOLOGICAL AGENCY CAN BE OBTAINED.—Wright, Fleming, and Colebrook, in *The London Lancet*, discuss in some detail their observations on the treatment of bacterial infection of wounds, giving a careful description of the technique adopted. They point out the fallacy of the assumption that the organism is unable to deal with the infecting microbes—in which case there would be bacterial infection from which nobody could recover. They add that in order to ascertain what the body is capable of achieving, we must find out how to bring its powers effectively to bear. They state, (1) Serum from normal blood and normal lymph constitutes for the vast majority of the microbes met with in foul wounds a very unfavorable culture medium; only the streptococcus, the staphylococcus and certain diphtheroid bacilli can grow in unaltered serum, and when a minimal implantation is made the streptococcus alone gives a growth. In other words the microbes of wounds fall into two categories: serosaprophytes, which grow in corrupted, and serophytes, which grow in uncorrupted blood fluids. Hence, (a) a wound that contains serosaprophytic organisms contains corrupted discharges; (b) if the wound can be flooded with wholesome serum and that serum kept uncorrupted, the infection will be reduced to a purely serophytic generally to a streptococcic and staphylococci infection. (2) Trypsinized serum provides an excellent culture medium for practically every species of microbe. (3) Neutralized or partially neutralized serum, such as obtains in every condition of collapse is a medium in which serophytic as well as all the microbes of the gas gangrene class flourish. These latter, however, are not genuine serophytes but serophytes only of acidosed blood fluids, which means that a gas gangrene infection in tissues in cases where the circulation is uninterrupted can be combated by drawing away the acidosed lymph and replacing it by alkaline lymph. (4) The whole blood constitutes a medium of essentially the same quality as the serum, in which only saprophytic microbes will grow. These observers then show by means of experiment that what is essential to the achievement of bactericidal effects is the employment of freshly emigrated leucocytes—which from a clean wound surface are precisely the same as from blood clots—the keeping of these alive and active, and the removal of the excess of serum which would carry the microbes out of reach. The solution of the problem of sterilizing the actual wound surface they believe will be found along these lines. They submit experimental data to show that it is possible to sterilize the superficies of a wound by the agency of antiseptics, provided that the surface has been washed perfectly clean from albuminous substances. Finally conclude with the following statement of facts proved to be true as against that which has been shown to be erroneous: (1) It has been erroneously inculcated that every wound should be sterilized before closure; and that, therefore, primary suture should be avoided and secondary suture undertaken only after a course of antiseptics. There is now no question, with respect to primary suture that the wound taken after early surgical cleansing and resection is as good as sterile; and, with regard to secondary suture, undertaken with a wound in good condition and a purely serophytic infection, that such operative procedure, provided it leaves behind no infected

dead spaces, directly contributes to sterilization. (2) It has been taught that we should judge of the fitness of the wound for closure by necro-pyo-cultures and direct microscopic examination of the pus. We have learned that it would be infinitely more reasonable to base our judgments upon the results of bio-pyo-culture. (3) It has been taught that suture cannot be successful in a wound containing a haemolytic *Streptococcus pyogenes*. We have seen that leucocytes can, given proper conditions, successfully combat this, and of course all other streptococci; and that these conditions can be realized in connection with the suture of wounds. (4) It has been taught that for the removal of sloughs from foul wounds chemical solvents are required. We have learned that sloughs can be removed by tryptic ferment set free from disintegrated leucocytes, and that the liberation of this ferment can be greatly accelerated by breaking down the leucocytes in the discharges with hypertonic saline solution. (5) Lastly, it has been taught in connection with antiseptics that sterilization is obtainable only by continuous or very frequently repeated application. We have learned that there is nothing to prevent any part of a wound surface which has been washed quite clear of albuminous matter being sterilized by a single application of antiseptics.—*Charlotte Med. Journal*.

CARDIOVASCULAR LUES.—Greene in the *Journal-Lancet* of May 1, 1917² concludes an article on this topic with these views which bear on treatment:

1. The discovery of *treponema pallidum*, perfected methods of demonstrating it in body tissues, the development of the Wassermann and luetin tests, and careful and extended studies based upon these, have resulted in an exact knowledge of the wide dissemination of syphilis and its enormous importance as a factor in the causation of diseases of extraordinary diversity.

2. We now know that the term "cerebro-spinal syphilis" embraces a large number of diseases in which its presence was formerly only assumed or wholly unsuspected.

3. It now appears that, to an extraordinary degree, the mortality of the disease depends upon its vascular ravages, which are proven fundamental in many ailments of strikingly diverse complexion.

4. It may assume any one of the various forms of sclerosis, endarteritis, or myocardial degeneration, but presents in most instances in the earlier stages of the latter, certain characteristic lines of attack and modes of histologic expression.

5. The most characteristic of these is the productive mesaortitis of Francis H. Welch, extraordinarily prevalent, almost constant microscopically in a more or less developed form at autopsy in every case of proven syphilis, and the actual cause of death in 50 per cent. or more of such cases.

6. This disease shows a peculiar affinity for the first portion and arch of the aorta, and tends to assume at the root of that artery a characteristic line of march which in 80 per cent. of the cases results in the establishment of secondary aortic regurgitation of a peculiarly progressive and intractable type, once it reaches the stage of frank myocardial insufficiency.

7. In 20 per cent. of such cases of the advanced type true aneurism and frank angina pectoris major occur in about equal proportions.

8. The leading symptoms, aside from those of aneurism and actual angina pectoris, are pain, dyspnea, diffuse dilatation of the aorta, and progressive crippling impairment of the vascular reserve.

9. Many of these cases are wholly silent, and the symptom-complex may be blended, incomplete, or so misleading as to be almost readily misinterpreted.

10. Only through recourse to more rational methods of early diagnosis, dependent upon the proper recognition and weighing of minor symptoms, subjective and objective, may these cases be detected early enough to render specific treatment properly effective.

11. The utmost importance attaches to the Wassermann test, but only when it is in the hands of an expert serologist.

12. The improper use of this test and the false reliance placed upon it must vitiate many reports, and result in errors of omission and commission, damaging to the physician and a source of humiliation and injustice to the patient.

13. Finally, a consideration of this topic emphasizes not only the importance of the individual cardiovascular luetic lesions, but also the terrible potency of syphilis as a cause of death at a period remote from the primary infection and through channels which so conceal its identity as to obscure the fact that it may yet come to be called the "Captain of the Men of Death."

THE RELATIONSHIP BETWEEN THE WASSERMANN REACTION AND THERAPEUTIC EFFORT.—In a recent review of White and Martin's book upon Genito-Urinary Diseases we called attention to the statement, in the preface of that work, to the effect that the mere presence of a positive Wassermann reaction, in the absence of definite syphilitic manifestations, did not justify the physician, at least in every case, in instituting anti-syphilitic treatment. From the day when the Wassermann test was first brought before the profession until the present moment it has been evident that, like all other forms of human endeavor, it is liable to error in its technique and interpretation, and is capable, if depended upon too completely, of leading to disaster for both the physician and patient.

In the first place, it is possible that, through some error in technique, a negative report may be made when a positive report should have come to hand, and *vice versa*. It also happens not infrequently that a carefully made Wassermann test of the blood is negative, whereas the cerebrospinal fluid is positive, and, again, it has long been recognized that in the presence of a negative Wassermann test of the blood the administration of a so-called provocative dose of salvarsan will reverse the verdict. It has also been becoming increasingly evident that the Wassermann test is not infallible and that, like every other diagnostic factor in the study of a case, it must be taken for what it is worth and given its proper degree of value.

Many years ago, before the introduction of some of the present instruments of precision such as the blood-cell counting apparatus, the phonendoscope, various laboratory methods, and, last of all, the xray, the clinician had to depend upon his experience, his powers of keen observation and careful examination, and only succeeded if he trained his eye, his ear, his sense of touch, and even his sense of smell, to the highest possible degree of acuity. There can be little doubt that at the present time the younger members of the profession are too much inclined to let these forms of training lie fallow and to rely upon what they have been brought up to consider as more accurate laboratory methods. That the laboratory methods are, in the majority of instances, more accurate cannot be denied; that they should always be utilized is self-evident; but the point that we desire to make is that careful training of the clinical sense is as important as ever.

These facts are emphasized by an article by Symmers, Darlington and Bittman upon the "Value of the Wassermann Reaction as Indicated by

Post-mortem Investigation in Three Hundred and Thirty-one Cases at the Bellevue Hospital, New York." From this article it is evident that what we have already stated in regard to reliance upon the Wassermann test holds true, namely, that it is one of the factors in reaching the diagnosis, but not the whole thing. These authors make a number of exceedingly wise deductions which are worth quoting. They say that in order to arrive at an intelligent interpretation of the result of the Wassermann test it is necessary to start with a conception of syphilis from an anatomic basis, and that all the signs of syphilitic infection, from the primary lesion to the scar which is left by the presence of the disease, are to be considered as a purposeful reaction to the injury, whereas the Wassermann reaction is not definitely specific, does not always occur in syphilis, does occur in conditions other than syphilis, and is a biological phenomenon in its nature and not anatomical. The Wassermann test should, therefore, be used to confirm the clinical diagnosis rather than to form a foundation from which other symptoms may be built up into definite form. Thus, before the Wassermann test was introduced the clinician looked for a genital scar, for pigmentation scars over the tibia with thickening of its periosteum, for enlarged lymph nodes, for thickening and atrophy at the base of the tongue with deformed cicatrices of the epiglottis, or perforation of the nasal septum. Now, all too frequently, the patient is referred to the laboratory, and the whole diagnosis and plan of treatment rests upon the report which is received.

Symmers, Darlington and Bittman tell us that, depending upon the antigen employed, the Wassermann reaction in the living subject gave them a negative result in from thirty-one to sixty-six per cent. of cases in which the characteristic anatomical signs of syphilis were demonstrated at autopsy, and, again, they claim that the Wassermann reaction in the living patient is positive in at least thirty per cent. of patients in whom, when the patient arrives at autopsy, it is impossible to demonstrate any of the anatomical lesions characteristic of syphilis. It behooves us, therefore, to remember that, valuable as it is, the Wassermann reaction should not be too thoroughly relied upon for diagnosis and treatment.—*Editorial Therapeutic Gazette.*

WHAT SHOULD THE PRACTITIONER KNOW ABOUT THE WASSERMANN REACTION?—Eisenberg gives the following suggestions to the practitioner regarding the Wassermann test:

1. Do not hesitate to give the serologist as complete a history of the case as possible, when sending the blood for Wassermann test—you want it for the physical examination, he should have it for the Wassermann test.
2. Insist—when a treated case is referred—to have the laboratory do the "titration" test; it will prevent much disappointment.
3. Tell the patient to leave whisky and beer severely alone for 48 hours before the blood is taken for the examination.
4. Eisenberg believes the Noguchi modification is a much more delicate test, giving at least 15 to 20 per cent. more positive results in syphilitic cases.
5. Not only a single negative test on the blood, but even when repeated—does not exclude lues—we may be dealing with cerebrospinal syphilis in which the blood is, in a great majority of cases, negative. No one should be pronounced free of syphilis until both the blood and the cerebrospinal fluid have been examined.
6. Repeated positive tests almost daily always mean infection, but remember that there is such a thing as a false positive test.

7. Remember that some bloods and cerebrospinal fluids, especially the cases of the vascular and cerebrospinal lues, are "Wassermann-proof" (Wassermann-fast).

8. At least two antigens should be used in doing the test—personally Eisenberg prefers the acetone-insoluble lipoids (Noguchi Antigen) and the cholesterinized heart (Sachs antigen). The latter is extremely sensitive, so that it is of the greatest value when negative, as it absolutely excludes the infection.—*Cleveland Medical Journal*.

EXAMINATION OF HEART OF DRAFTED MEN.—The new system of examining recruits as conducted at Camp Funston, at the present time Benjamin describes as follows: In the first place, the men are immediately assigned en masse to one depot brigade. Immediately on arrival they are all examined in this organization, where also meet the special boards. The men are stripped of their civilian clothes, given their initial bath, and proceed immediately to undergo their first general examination, where they are also vaccinated, inoculated against typhoid, their finger-prints taken, and all examined for tuberculosis. This latter board immediately refers the cardiac cases to the special examiners.

In the cardiac room the system is as follows: One examiner and one corps man are in attendance. A record is kept of each man. Six men can conveniently be examined at one time. Various numbers are written on the chest by the examiner to be copied by the corps man, thus eliminating the necessity of calling off data. The interpretation of the numbers is as follows: A number at the top of the sternum represents the dorsal pulse rate. A number under the left shoulder is the serial number of the recruit, one to the right of the sternum is the measurement of the right border of the heart from midsternum and one to the left is the number of centimeters the left cardiac border extends from the midsternum. Two numbers are written beneath the nipple to indicate the space where the apical pulsation is felt with greatest force and its location inside or outside the nipple line. After completion of this data the patient is directed to lie down, when the dorsal pulse rate and blood pressure are taken. After this he is directed to hop 100 times on one foot (the type of hop being first demonstrated), after which the pulse rate is taken by listening with the stethoscope. The largest number of recruits examined in this way in one day was forty-five.

Concerning the lesions found during the examinations, of special interest is the numerical relation of mitral stenosis to mitral insufficiency. During the earlier months of the examination very few cases of mitral stenosis were reported. It was only after the tuberculosis board began its work that these cases started to roll in. They were referred, first, because of symptoms of cough, dyspnea or hemoptysis, for which they were sent for examination of their lungs because of suspected phthisis, or they were picked up in the course of the chest examination, hitherto unsuspected. The members of the tuberculosis board had been previously instructed as to just what cardiac signs to look for in the course of their work. The criteria of diagnosis as explained to them were: (1) presystolic thrill, (2) snapping first sound at the apex, (3) presystolic roll at the mitral area, (4) loud pulmonic second sound.

Doubtful cases were sent back to their organizations with a note requesting that the soldier be watched for the ensuing four weeks and at the expiration of which time to be returned with a note stating how he endured

Regular Army duties. With the exception of a very few, such persons proved to be very undesirable soldiers. The cause, so far as was possible to determine, seemed to have been previous attacks of rheumatism. Insufficiency of the aortic valves was relatively frequent. With the exception of five cases, rheumatism seemed to have been the etiologic factor. Wassermann tests were made of all the persons in this group, and in only five were positive results obtained. Curiously enough, persons who had this lesion stood Army duties peculiarly well, as in only a very few instances were the lesions found except in the routine examination, symptoms having been wholly lacking. As regards aortic stenosis, only two positive cases were found by Benjamin.

Fifteen cases of undisputed hyperthyroidism were diagnosed. The irregularities were rather conspicuous by their almost entire absence. By the aid of roentgen ray the diagnosis of two cases of aneurysm was confirmed. In one instance the sacculation occurred in the middle of the arch; in the other in the beginning of the descending branch of the aorta. It is Benjamin's opinion that the close association of cardiovascular and tuberculosis examiners is a most desirable one. There is no doubting the fact that undesirable soldiers are thus eliminated early in their training. Of special interest is the observation that practically no case of "disordered action on the heart," so vividly described by members of the research committee of the Hampstead Hospital, England, has been found.—*Journal A. M. A.*

BACTERIAL EXAMINATION OF WOUNDS.—Levaditi (*Presse Medicale*), states there is no longer any doubt as to the importance of bacteriologic examination of war wounds as a guide to the indications and results of primary, primo-secondary, and secondary suturing. In the case of a primarily sutured wound the inoculations are made from a wick of silkworm gut strands placed in the centre of the wound before suture. In wounds that are to be left open, the cultures are taken fifteen to twenty hours after the surgical cleansing procedures by means of a tampon on a metallic rod, placed in a sterile test tube. From this tampon are inoculated in succession an agar slant; a tube of glucose agar (Veillon), and a tube containing two mils of bouillon and 0.2 mil of horse serum. With a fine pipette a second passage is made, beginning with the agar slant and glucose agar. Finally, a smear should always be made from a second tampon previously passed into all the wound recesses. This should be stained with Gram fuchsin. The results are recorded after twenty hours' incubation on a special chart with separate columns for the bacterial species detected and the results of quantitative microscopic study of the smear, the number of bacteria per field being noted. This quantitative examination, carried out every two or three days until suture is deemed opportune, supplies data for a bacterial curve and shows the precise moment of critical depuration of the wound. In a separate column the indications for suture are noted by the bacteriologist for the surgeon's information. Wounds with streptococci, primarily sutured, must be watched and the sutures cut in the event of marked general and local reaction; if not yet sutured, they should be submitted to adequate treatment, preferably the Carrel procedure, and left open until the cocci disappear or are sufficiently attenuated to permit of healing by first intention or almost complete closure. In wounds showing other germs, suture is in order unless the infection is very abundant, in which event they should remain open until the bacterial curve indicates the moment of critical depuration.

VISCERAL MANIFESTATIONS IN CONGENITAL SYPHILIS.—H. Barbier (*Bulletins et memoires de la Societe medicale des hopitaux de Paris*, March 7, 1918) directs attention to certain nervous symptoms encountered by him in numerous cases of inherited syphilis, viz., attacks of vomiting or of abdominal pain, and incontinence of urine. The vomiting attacks are most common among patients between the ages of five and ten years. The attack starts suddenly, while the child, perhaps, is playing or talking, and without relation to meals. Usually it begins early in the morning. It is preceded by prodromes, generally a frontal headache, sometimes very severe, which appears a few hours or even days before the vomiting. The headache disappears, as a rule, rather rapidly after vomiting has set in. Sometimes there are also nervousness and peevishness. Sleep is less sound than usual. Vomiting may be repeated a number of times, up to twenty times a day; in the latter event blood may appear in the vomitus. The attack as a whole may last from a few minutes to two or three days. When the vomiting ceases, the child returns to its playthings. The attacks are not periodic; many of the patients have two or three a year, but longer intervals may elapse. At times a transitory meningeal syndrome supervenes, with somnolence, irregularity of breathing and heart action, and disturbed reflexes. The cerebrospinal fluid yields a positive Bordet-Wassermann reaction, but the blood reaction is variable. The attacks tend to diminish toward puberty, but are previously amenable to systematic antisymphilitic treatment. Barbier gives biniodide or small doses of potassium iodide by mouth, avoiding inunctions which he has found dangerous in these cases. Sudden attacks of enteralgia with liquid stools, passing off suddenly, and enuresis occurring alone or in conjunction with gastric attacks in children of four or five years, are other manifestations of inherited syphilis.—*N. Y. Medical Journal*.

THE MODERN CONCEPTION OF DIABETES.—The London *Lancet* says that diabetes has always been characterized by the excretion of sugar in the urine. Previously the generally accepted treatment has been to exclude carbohydrate from the diet, but, at that, the patient still excreted sugar. The source of this sugar has been traced to protein. Protein consists of some eighteen aminoacids. Some of these are converted, in diabetic patients and in experimental animals (depancreatised, phloridzinised) into glucose. Another origin of carbohydrates in diabetics is fat; but this is not of outstanding importance.

The acetone, acetoacetic acid, and oxybutyric acid which are characteristic of severe cases of diabetes have been proven to be derived from the fat of the food, but they may also arise from protein. Acetoacetic acid is the primary product, oxybutyric acid being a reduction product of acetoacetic acid. The production of acid was formerly thought to be the cause of diabetic coma, but the coma is really due to the toxic action of acetoacetic acid. Since acetoacetic acid is a ketonic acid, the term ketosis might be used in preference to acidosis. Though acetoacetic acid may, theoretically, be derived from carbohydrate this source may be excluded, according to the latest work done by Hurltley.

Glycosuria is then derived from the carbohydrate and protein of the diet; the acidosis, from the fat and to a small extent from the protein. The diabetic uses the carbohydrate of the food too slowly; some of his carbohydrate he derives from the protein and fat leading to more decomposition of these than normal and the production of more acetoacetic acid, which

is reduced to oxybutyric acid, and excreted, instead of being oxidized as normally.

The modern treatment of diabetes as described by Dr. E. P. Poulton in his Goulstonian lectures is to reduce the amount of all kinds of food stuffs to the lowest possible limit, thus reducing the quantity of the excretory products. The mortality in Guy's Hospital has been reduced from twenty-three per cent. in the ten years previous to 1916, to seven and seven-tenths per cent. since 1916, owing to the adoption of this method of treatment. The carbohydrate disappears from the urine and there is less acetoacetic acid. By careful addition of carbohydrate to the diet the patient's tolerance for carbohydrate is determined; similarly the protein and fat amounts are adjusted. By this method of treatment the patient may attain a diet of 1,500 to 2,000 calorie value, the lowest possible limit for the normal individual.

MANAGEMENT OF CONSTIPATION AMONG SCHOOL GIRLS.—M. E. Brydon (*Virginia Medical Monthly*, June, 1918) comments on the frequency of constipation among otherwise normally healthy school girls, and ascribes it to five causes, viz., dietary indiscretions, insufficient exercise, insufficient ingestion of fluids, lack of regularity in defecation, and cathartic drugs. The first of these consists in the ingestion of enormous amounts of sweets, pickles, crackers, and other prepared foods looked upon as a necessary adjunct to the monotonous school fare. Most of this material is readily assimilated and lacking in residue. In the treatment, a list of foods rich in cellulose is given, viz., cabbage, tomatoes, onions, spinach, corn, string beans, lettuce, cucumbers, asparagus, wheat and rye bread, and the coarser cereals, oatmeal, corn meal, and hominy. Bran is a valuable help and should be used as an addition to cereals, breads, etc. Some fruit should be taken at each meal, if possible, and before retiring. To be avoided, in a general way, are excess of eggs or milk, sweets, pastries, nuts, cheese, crackers, new white bread, hot bread, toast, macaroni, rich stews and gravies, most chafing dish products, condiments, and soda fountain drinks. The reasons for these dietetic recommendations are carefully explained. As regards lack of exercise, most girls, in spite of having gymnasium work twice a week, lead almost sedentary lives. A half hour walk, covering a certain distance, must be added by the girl patient in her daily schedule. Invariably these patients do not drink enough water. The necessary corrective suggestion is best effected in the form of questions, bringing out the fact that the body loses twelve glassfuls of water a day, while the fluid in solid foods only makes up about four. Irregularity of defecation is overcome only by impressing the proper mental attitude on this point on the patient. As regards drugs, their dangers should be explained as impressively as possible, and the girl required always to report if she needs a laxative, as well as at regular intervals. In those already inured to the laxative habit cascara is given, three minims three times a day, increased one drop daily until a good daily movement results, then reduced one drop daily to complete cessation. Suppositories, enemas, abdominal massage, and calomel are to be avoided.

TUBERCULIN IN DISEASES OF THE EYE.—Though the therapeutic employment of tuberculin in other parts of the body has fallen into deserved disuse, thanks to the unjustified over-confidence of its enthusiasts, there are no doubt certain conditions in the eye where its use, if not a specific, is of well recognized value. Some of the poor results claimed from its use are properly blamed on those who administered it, as it is a very powerful agent,

which when not properly used is capable of doing a great deal of harm. Hence its dose, mode, and frequency of administration are to be very carefully considered before treatment is instituted; and while we may not fully agree with Verheyden (*British Journal of Ophthalmology*, April, 1918) that the treatment of the patients is best given in a hospital, it is not to be denied that extreme care is to be exercised, whether the patient is a hospital case or an ambulatory one. The old tuberculin is used, or the bacillary emulsion, the initial dose being as small as one five thousandth of a milligram, or even one ten thousandth, such small doses being obtained by gradual dilutions with a normal salt solution to which one half of one per cent. of a lysol solution had been added, until the desired strength of the solution is obtained. After the first injection, and frequently even after the subsequent ones, there may be a reaction either at the site of the injection (local), or in the eye (focal). This should serve as a contraindication to the continuation of the treatment until the signs of the reaction subside: the dose is then gradually and cautiously increased. A reaction during the course of treatment would indicate a return to a smaller and safer dose. In fact, it is advisable to examine carefully both the exterior of the eye and the fundus with an ophthalmoscope after each injection. The adjuvant treatment, such as dionin, yellow oxide salve, subconjunctival saline injections, the routine employment of atropine, and so on, is not to be neglected by any means.

Eczematous or what used to be called scrofulous affections of the cornea, with or without invasion of the conjunctiva, are the cases, *par excellence*, which are benefited by tuberculin treatment. A plea is made for a more frequent and methodical use of tuberculin in these cases, which frequently resist the old established methods of treatment, and in which corneal opacities of various degrees of density are apt to be left, with consequent impairment of vision. The ready response of these cases to the treatment is a clear indication that the affection is tubercular in nature. This is not at all at variance with the gradually prevailing views on this disease. For the last quarter of a century the etiology of eczematous eye affections has claimed the attention of ophthalmologists, and an undoubted relation has been established between tuberculosis and these diseases. The prevailing notion is that the eczematous nodule is a local manifestation of a toxemia arising from a tubercular focus situated somewhere in the body; this has been found to be the case in a great many of the patients examined, though no tubercle bacilli were ever found in the nodule itself. It is also claimed that in a certain class of patients suffering from phlyctenular disease the opsonic index for tubercle was lowered and that it gradually rose with improvement in the condition. A great percentage of these cases respond to both the von Pirquet and the Moro tests. Cridland quotes Belenky-Raskin to the effect that out of one hundred cases of phlyctenular disease subjected to the von Pirquet and Moro tests, the first was positive in ninety per cent. and the second in eighty-five per cent. of the cases. Cases of episcleritis and scleritis of obscure origin are also greatly benefited by the tuberculin treatment, thus proving that some at least of these cases are of tubercular origin. As they are usually very resistant to treatment, and are apt to be followed by very serious consequences to vision, the improvement under this treatment is a distinct gain. A more or less similar improvement has been noted in affections involving the iris and the ciliary body (iritis and iridocyclitis): in these cases, when recent, and before profound organic changes have been established, improvement under tuberculin was undoubted.—*Editorial New York Medical Journal*.

THE FOURTH VENEREAL DISEASE.—Owen in the *Indian Medical Gazette* for February, 1918, describes a disease the outlines of which are given as follows:

It usually begins on the sulcus coronarius, prepuce, or glans; commonly as one, sometimes as several small superficial erosions, which may heal in the course of a few days without treatment. At times the surface of these ulcers may show a bright-red color, while at other times they are covered with a grayish film of coagulated exudate and necrotic tissue. Where several small lesions are present, they usually coalesce in the course of a few days.

The most, in fact the only characteristic symptom of this type of venereal sore is the early and abundant production of a white or yellowish pus of a most foul odor. This pus, however, may be lacking in the early stages of the disease, or may have been kept in abeyance by mechanical cleansing.

The lymphatic glands are enlarged and usually painless, with the dorsal lymph cord sharing in the lymphatic involvement. Aside from the inguinal region there is no adenitis. Suppuration of the affected lymph glands does not occur.

The majority of patients show no constitutional symptoms, but in the gangrenous type where the destruction of tissue may be rapid and extensive profound sepsis may supervene.

Phimosis and swelling appear early and are often marked, making treatment difficult without surgical intervention.

This type of sore is most apt to be confused with chancroid, as both have the same incubation period, the sore usually appearing within two to seven days after exposure.

In chancroid, however, the ulcers are more likely to be multiple, and show contact infection on apposing surfaces which we have not observed in balanitis; and there is much greater tendency manifest to undermining of the edges of the ulcer with the production of a ragged and irregular border. Painful inguinal adenitis with resulting bubo is common in chancroid, but has not been observed in balanitis of this type.

Balanitis cases show more abundant pus of a foul odor, and produce earlier and more marked edema and swelling. Phimosis is very common and appears quite early.

The process is differentiated from the Hunterian chancre by the much shorter period, by the rapidity of development of the pathologic process, and the production of the pus described above.

However, we have long ceased to depend on visual observation alone in differentiating between chancre and chancroid; for while there is a typical hard chancre, it is so often masked by an accompanying chancroidal infection that diagnosis is difficult if not impossible.

Indeed, Owen has found that at least 30 per cent. of his cases of true syphilis are complicated by a chancroidal infection, and such cases can be diagnosed with certainty only by means of microscopic and serologic methods.

THE TREATMENT OF WHOOPING-COUGH.—In the *New York State Journal of Medicine* for January, 1918, Shaw states that the value of the vaccines as a prophylactic measure is undeniable, and they should be administered to every child exposed to whooping-cough. Luttinger did not find a single severe reaction in over 3000 injections, and this has been the experience of the writer, who has administered large doses to infants six weeks old. It can therefore be stated that vaccines are harmless, do not produce severe

reaction, and there is no danger of anaphylaxis. The dosage used for prophylaxis is the same as for the treatment, namely, five hundred million for the first injection, one billion for the second, two billion for the third, giving the injections every second or third day. Shaw has administered, with good results, one billion every two days for ten days.

The results from the vaccine in the treatment of cases already in the paroxysmal stage are not as striking as in prophylaxis, but the consensus of opinion is that where the proper vaccines are used there is a shortening of the paroxysmal stage, with a reduction in the number and severity of the paroxysms. A study of the use of vaccines in 112 cases of whooping-cough, in which this was the only treatment employed, shows that in 36 per cent. of the cases in which the vaccines were given after the whoop developed, the course of the disease was shorter than the usual duration of the whooping stage—that is, thirty days—but with no effect on the number and severity of the paroxysms; in 52 per cent. there were fewer paroxysms and of lessened severity, especially at night; in 12 per cent. of cases there was no improvement observed, either in the course of the disease, its severity, or the number of paroxysms.

TACHYCARDIA IN THE ENTERIC AND OTHER FEVERS.—H. Fairley Marris (*Lancet*, May 11, 1918) from an extensive observation of the cardiac condition in the enteric and other fevers and during convalescence from such fevers, classifies the tachycardias encountered into those due to cardiac lesions; those of postural or atonic origin; and those arising from general instability of the vasomotor nervous system. In 650 cases of the enteric infections there were seventy-five cases of tachycardia, of which five were due to cardiac affection, forty to vasomotor instability, and ten to postural causes. The others showed features of both of the latter groups. Tachycardias observed in other febrile conditions fell into the same groups, in most of the fatal cases being of cardiac origin, while the majority of the nonfatal cases were of vasomotor origin. The diseases in the fatal cases were chiefly diphtheria, meningitis, miliary tuberculosis, and scarlet fever. In the nonfatal cases the diseases were chiefly diphtheria, scarlet fever, influenza, trench fever, and obscure pyrexias. In the tachycardia of cardiac disease the rapid pulse was present in sleep as well as during waking, and the ability to hold the breath was much impaired. In the vasomotor tachycardia the increased rate occurred only when the patient was awake and was not influenced by postural changes, and the ability to hold the breath was normal. In that due to atony the increased rate occurred only with the patient in the upright position and was relieved by the application of a snug abdominal binder. The cardiac tachycardias were treated as heart cases; those of vasomotor origin occasionally responded to the use of strophanthin, but usually failed to do so, while they were benefited by graduated exercise, massage, and the administration of bromides. The atonic variety were helped by the use of tight abdominal binders, massage, and the administration of tonics.

LONDON HOMOEOPATHIC HOSPITAL REPORT.—“Last winter, they had fifty cases of pneumonia in the hospital, most of them bad cases. As they knew, pneumonia was not exactly an illness to be trifled with, and out of those fifty cases there was only one death. That meant that, as far as that hospital was concerned, pneumonia had been practically removed from the category of malignant diseases.”—*Meeting of June 18th.*

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THE "HOPELESS" PROGNOSIS IN GRAVE CARDIAC PICTURES.

BY

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BERTRAM RUSSELL'S startling definition of mathematics as, "The subject in which we never know what we are talking about, nor whether what we are saying is strictly true," applies as well, we think, to much of our prognostic declaration in many cardiac conditions. Especially is it true of those graver cardiac pictures in which only a hopeless outlook is foreseen. And it would not matter so much whether we sentenced such a patient at once to death; or granted him a reprieve, did not the former course rather tend to lessen effort in his behalf and to deprive him of the benefit of some of those therapeutic "inspirations," which are the result of continuous thoughtful study on the part of his physician.

We have practiced long enough to know that the prognosis in grave cardiac pictures is seldom entirely "hopeless" as long as the doorbell is free from crepe.

One of the things that arrest attention during the treatment of these graver cardiac conditions, is the fact that we can seldom anticipate with certainty, the particular medicinal

agent that is going to start to complete the improvement. This desirable medicine probably exists—may even be known to us—but its relationship to the case in hand may never occur to us. It is quite true that a man may easily possess a large fund of *materia medica* knowledge in the abstract; and yet be slow to “feel” those individual relationships of remedies to cases that alone make for curative actions.

There is probably a great deal known of the *digitalis purpurea* as a medicine for these graver cardiac cases; but who can anticipate with certainty its effects upon the individual case? We have all experienced keen disappointments in our use of this well-known drug. And this is no less true of the whole list of so-called cardiac remedies. And we must also admit that what has been said is often true of those strictly homœopathic remedies, prescribed after careful individualization.

Nevertheless and in spite of all this, the fact remains that repeated non-success does not justify a “hopeless” prognosis in many of our grave cardiac cases. Neither does it justify a moment’s relaxation in the effort to find the medicinal agent that will start improvement. We may succeed in finding that medicine, even after repeated failure both with drugs prescribed upon abstract knowledge and with remedies prescribed upon the more specific individualizations of homœopathy.

Our latest experience of this kind justifies the conclusion. A female, aged 58 years, suffering from extreme dilatation, with feeble, irregular, slow pulse and general anasarca; had been taking large doses of assayed tincture *digitalis* for three months without interruption. We had the assurance of her previous physicians that there was nothing further that could be done for her, and further that the withdrawal of the *digitalis* therapy would doubtless result in sudden death. Nevertheless, owing to the distress which seemed to follow each dose of the *digitalis*, and the nausea and vomiting which were more or less constant and prevented the taking of food, it was thought best to gradually diminish the *digitalis* so that within a month she had ceased to take it.

The annoyances traceable to the drug, gradually passed away; but the cardiac picture was unchanged. The following symptom picture was finally established. It is one famil-

iar enough to all of us, I think, with the exception that the remedy suggested by it, as necessary, is not so apparent.

Mentally, there was nervous anxiety and apprehension.

Her face was cool, pale and bloated.

Oedema of lower extremities and hands were noticeable.

Extreme weakness, and inability to rise from recumbent position.

Frequent attacks of suffocation, with gasping for breath.

Some transient cyanosis upon effort of any sort.

A constant, dry, titillating cough; without expectoration, without physical signs within the chest, save dullness over the posterior bases thought to be due to hypostasis.

The urine was dark, scanty, thick, albuminous.

The pulse quickened to 65 or 70 after stopping the digitalis, but was feeble, intermittent and irregular at all times. On exertion, the pulse could not be found at the wrist.

Constant coolness of entire bodily surface.

The realization of the remedy which afterwards proved to be the proper one, came to my mind in the following manner: First, the tickling cough suggested *laurocerasus*, because we had several times previously used it with success in such coughs, associated with cardiac disease. Then, following this suggestion, we took up the whole symptom picture and studied it repertorily. It did seem safe to trust the remedy not only for the cough, but for the cardiac picture, the coolness, the dyspnoeic breathing and the mental apprehensiveness. The third decimal dilution was given for some months; I had hoped for an amelioration, but was not prepared for the remarkable results. All her alarming symptoms passed away, and with an excellent cardiac action, she got about and has remained comfortable since.

One can never tell, *a priori*, just how much such a remedy will accomplish, but one could never come upon such a remedy without the assistance of that peculiar ability to recognize the remedy, which the study of homœopathy alone can give to a physician. My single experience which I have chosen, as an illustration, can be duplicated in many variations, as tens of thousands of illustrations, by the homœopathic profession. And yet, it would seem that the study of homœopathy to-day, is considered such a trifling thing that it may safely be dropped from a medical curriculum, without loss to the sick men and women of this world. We shall see if that is true.

APPLIED MATERIA MEDICA: ITS PAST, PRESENT AND FUTURE.

BY

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It is obvious that in an article the size of this one, it is impossible to cover the entire field of a subject so vast as is this one, but fellow physicians, this little paper is written as a clarion call to a sincere consideration of the matter by those men of all medical schools who are really interested in the welfare of the future of internal medicine and especially those things pertaining to the continued existence of a real homoeopathic materia medica. In this great world of ours we are constantly changing view-points and in so doing there is great danger of a departure from what is true and best. This applies too, as applied to politics, religion or medicine. Theory, theory, theory is propounded, expounded and finally exploded. The art of the practice of medicine has had a wonderful development, but whatever have been the changes of thought or of practice, it still remains an ART. There may be and are many sciences needed to prepare one efficiently to apply in proper manner this Great Art, but no matter what the age—what the condition of social life, no matter what the school of medicine or practice, the healing of the sick and injured and the practical application of knowledge, the treatment of the diseased of the human race remains an art. Sicknes, injuries, births and deaths will continue as long as does humanity itself, and such being the case, the successful meeting of whatever conditions which may arise must be considered, these conditions must be coped with, they must be faced and overcome. The art of healing will accomplish this in efficient manner if understood properly.

The method of treatment of human ills has had a most interesting development, and as one surveys its long past, he is inclined in off-hand manner to the belief that all previous forms of medical and surgical practice have been inconsistent and frequently naught but superstitious ones. Yet, too, one must also be prepared to admit that a measure of success has been attendant upon the use of such practices, for no matter what may have been the disadvantages of, or supposedly pure-

ly superstitious methods of procedure, humanity as a whole has continuously admired to a greater or less degree the followers of the practice of medicine, and its "ancestors"—whether ancient, mediaeval or modern—a thing that obviously would not have been the case had the art of healing been a blank and total failure.

Early in the past century the human race was living in a material age, the age of superstition being past and gone, and the re-action was so great that only large or material, and very material dosages of medicinal agents were prescribed and given, and these dosages were reckoned not according to the individual, but by simply empirical information. Needless to say, this method of giving drugs was followed by a reaction as was the superstitious age followed by the material age. The results of the physiological action due to large dosages and over-dosages became so apparent that investigations were begun, and as a result there was formed a new school of medical treatment—the homœopathic school. The adherents to this school of practice claimed that there existed a system of applying the articles in the *Materia Medica* to the sick under an actual law of cure, or at least of action. There is no valid reason for disbelieving this contention that such a law does exist, and for this reason a voice, though but feeble, should be raised in its defence, for with the re-action of thought within the folds of the so-called "Regular" or "Allopathic" school of medical thought and practice the application of real materia medica was seemingly doomed to an eternal death to a great extent in actual application. In other words, the medical nihilist had arrived. With the breaking of diplomatic relations, as it were, between the adherents of the old and new school of medical thought, and with the ever-increasing intellectual development of the average citizen the world over, the "secrets" of medical practice became more and more generally known and discussed by the layman, until the average layman was well able to discuss the uses and applications of drugs with his physician, and as a result patent nostrums became numerous and demands were made for simpler forms of administering remedial agents. The growth of lay knowledge became so great that the manufacture of drugs became a colossal business and the average medical practitioner was becoming passive if not a nihilist. These large drug concerns, after the expenditure of great sums of money in in-

vestigations and exploitations, were in position to explain the proper usages of their new remedies and to devise means of giving old drugs in new and better forms. The work had been so thoroughly done from a commercial standpoint, and as the older school of medicine was apathetic to say the least, the average physician was led to follow the directions which a given drug manufacturer would suggest. This habit of following the advice of the manufacturer has become so great and common that to-day a great majority of doctors are following the advice of the manufacturer without question as to what classes of patients to give a certain remedy and the dosage as well.

In the meantime the new or homœopathic school was finding a fertile field for activity and its growth has been most gratifying to its adherents.

Humanity, however, is ever restless, due to its loss of perfection caused by the fall of Adam and is ever looking forward to a restoration of the ideal man. This restlessness is a natural factor in life and generally of unconscious nature. Man, and especially that part of man comprised by those attempting to bring relief to the suffering, are looking toward *the prevention of disease*. Of course, this is a worthy cause, but the ideal, the true ideal of the prevention of disease should be the production of ideal racial conditions—a perfectly and truly man as was first intended that he should be.

As the practice of homœopathy became more popular, its simplicity was recognized and while its followers were phenomenally successful, *they* were not satisfied and wanted to be considered like the others or "regulars" in the profession, and as a result, we have to-day very, very few strict followers of the law of similars. This does not mean that there is no homœopathic profession nor that there are no true followers of dear old Hahnemann trying to alleviate the sufferings of humanity, but there are few who are real homœopaths. To prove, the great majority of homœopaths are prescribing compound formulae and are making other grave infractions of the school which stands against just that action.

To-day, foremost in medical thought are the uses of various vaccines for the treatment and *prevention* of various diseases. These vaccines are undoubtedly efficacious. However, the *great danger* is in *the losing sight of what applied materia medica has done and can do* for humanity. If not careful, the

world will very shortly lose to a great extent the art of healing the diseases of man by the application of real internal medication for we can see in the clouds that have gone by or dawning in the horizon the following facts:

1. Medicinal nihilism or apathy concerning drugs as curative agents.
2. The breaking up of real and true homœopathic practice.
3. The looming up of the serum treatments.
4. Grave possibility of the neglect of continued studies of curative and remedical agents.

With these four facts staring us in the face, gentlemen, we have glimpsed a little into the past and present and are called to face a future for applied materia medica and the call is sounded for imperative, effectual and sincere effort to hold secure forever the place it deserves in the art of healing, namely, the real and practical use of applied materia medica and not the routine use of a few narcotics, stimulants and vaccines. The past is gone! The present is here! What of the future? Act!

THE PROPER TIME TO OPERATE GYNECOLOGICAL CASES.

BY

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THERE is an old saying that there is a time for everything. This is certainly true from the standpoint of surgery.

When an operation is necessary, there is always a proper time in which to do it and especially is this true in gynecological cases.

The greater number of cases we see are referred to us by other physicians with a diagnosis already made and the time set for operation.

In making careful study I find this is a serious blunder in a great many instances for several reasons: in the first place, the general practitioner does not see the case with the same eyes as the surgeon and he rightfully claims that when

an operation is necessary it should be done, but does not figure upon the jeopardy into which he puts the patient, or upon the after-results. In the second place, a great many men in general practice think that all that is necessary is for the surgeon to operate his patient and she will be well regardless of the condition in which the surgeon finds her when first he sees her; in the third place, I find a number of surgeons operate patients who are sent into the hospital with a diagnosis already labeled, and they do not see them until they are prepared and ready for operation because they feel they have no right to question the diagnosis of the physician who referred the case to them, lest they hurt their friend's pride and prestige.

I have known cases to be operated when an operation was clearly not indicated and when the surgeon felt that it was too late to back down from the stand and diagnosis of the physician who referred the patient.

There are a number of other cases that are sent into the hospital and operated without any previous preparation, when in so doing we are not only endangering their lives, but we cannot hope for a good result.

It seems to me that it is high time that the gynecologist, not only in the large cities, but in the smaller ones and in all hospitals make it a hard and fast rule to operate on no patient until he has decided, first, on the time for operation, and this will be influenced by the necessary preliminary treatment; second, on the type of operation that is necessary.

I cannot urge too strongly the necessity for having your patients in the very best of condition before operation, and except in emergency cases, they should not be operated until they are in the proper condition to obtain the best results possible.

The time required will vary from a few hours to a number of weeks.

To illustrate what I mean, the surgeon who is up-to-date will not operate the patient with an acute inflammatory condition in the pelvis, involving the uterus and adnexia until such time as the acute stage has subsided and the temperature is normal, or near so, for at least from five to seven days, showing that the system has reacted against the infection and has produced a temporary immunity to the infection present.

In operating acute inflammatory cases, as was custo-

mary some years ago, the mortality was very high. These patients should first be prepared by rest in bed, nourishing diet, hot saline douches, ice cap to the abdomen and medication such as may be indicated, viz., *ecchinacia* and vaccine therapy tending to bring about immunity.

Often, as in the case of purulent salpingitis, posterior puncture through the cul-de-sac of Douglass will hurry the preparation of the patient for the operation that was necessary to follow, and in a great many instances will make unnecessary the operation that otherwise would be inevitable.

I am confident that the preliminary preparation of my patients before operation has been conducive of the very best results.

Another class of cases where the preliminary preparation is even more necessary are patients referred to you for perineal and cervical repair. The greater number of these patients have cervical erosions, cystoceles and local infections of the mucous membrane of the vaginal tract.

It is the height of folly to suppose that you can take such a patient to the hospital on one day's notice, as is the case in our hospitals, and obtain even a fair result.

In these days of asepsis and antisepsis, we demand that the field of our operation be as near surgically clean as possible and this is not obtainable without preliminary preparation.

In my repair cases I make it a rule to operate no patient until I am sure that the field of operation is practically as clean as it is possible to have it.

If my patient's history shows suppuration in injuries or abrasions I immunize with the mixed vaccines.

In cases with a vaginal discharge I use astringent and antiseptic douches until such time as the field for operation is in the pink of condition for such operation as is necessary.

We must not forget that the physical condition of the patient determines largely the success of the operation and the after-result that we wish to obtain, therefore our patient should be built up physically as much as possible by proper surroundings, diet, medicine, etc., then when our work is done we can be assured of the best possible results.

DISCUSSION ON DR. REPLOGLE'S PAPER.

DR. FREDERIC S. MORRIS, Pittsburgh: It has been the habit in our institution, for some time, in treating the acuter inflammatory lesions of the pelvis, to let them cool down, so to speak, before operating. The patients are kept in bed on a low diet, generally with rectal saline, until the temperature reaches normal. When that occurs, we see that these cases do not have the pelvis opened unless there is a localized abscess that can be reached through vaginal puncture, until four to six weeks after the temperature has been normal. There has been great trouble in getting the cases operated then; because there is no pain and the patients have gained in strength and want to go home. They usually insist on doing so, and up starts again the old trouble; and they come back to be operated on during the attack of pain. I do believe that the undue precaution of keeping these patients for a month to six weeks in bed to get ready for operation, only to have them refuse, should be avoided. The cases go on and become chronic affairs under this method of management. We get some that have lasted from twelve to fifteen years. During the last four months, we had two such cases. These things are not safe to remove, even though the abscesses are walled off. They are growing slowly; and when operated, they are likely to produce metastatic infection. There is such a case in the hospital now. It is one of metastatic infection of the parotid following the removal of a pyosalpinx. I cannot conceive of a physician's operating on a patient without previous examination, unless he had known the man very well and was certain that his diagnosis was reliable; because to have a patient sent in with the diagnosis put on him, and operate on that diagnosis, as a rule, without seeing the patient until under the anesthetic, is disastrous. I do not think that the surgeon who would operate without previous examination of the patient is an operator. He is a butcher.

DR. GEORGE N. MORELAND, Pittsburgh: I certainly shall not plead guilty to any such accusation as that of operating without having had an opportunity to, at least, try to make the diagnosis. I may not be correct, but I give the patient the benefit of whatever experience I may have in the way of making a diagnosis. I quite agree with Dr. Morris that one is certainly culpable who does that. I cannot conceive of an individual's doing anything of that sort, without, at least, trying to give the patient the benefit of his experience. That is

what the patient comes for. He expects the surgeon to have more ability than the physician in the way of making diagnoses of surgical conditions. The man certainly must have a peculiar conscience who would be willing, time after time, to do anything of that kind. I can conceive of a patient's being sent with a diagnosis of appendicitis and having pneumonia, because I know that at times—and particularly in children—it is very difficult to distinguish between the two conditions. If one should take the diagnosis of appendicitis as being correct and operate, one might find no trouble with the appendix and pneumonia might show itself later. I can see how a man might make such a mistake, because such mistakes have been made by some very clever surgeons.

As regards insufficient preparation for operation, I think that we are sometimes guilty of that; but, on the other hand, we sometimes give the patients too much preparation. We give them so much that they are unable to stand the operation. The purgation, etc., so lowers the vitality that the patient is unable to stand the shock of the operation. I think a great many people are swinging around the other way in their opinion on this point. They are not starting the patient, previous to operation, on a course of purgation, etc., that puts him into a condition that any one of us would hate to be in on the day after such a thing had occurred. If the surgeon has depleted the patient's system by giving him a great big purge, how is he going to stand the operation well? He is going to have, following the operation, an accumulation of gas, paralysis of the bowel and retardation of peristaltic action. The things that patients complain of after operation are sometimes due to the very preparation we make. We should not go too hurriedly at operation, but we should consider this question of preparation and not over-do it.

DR. REPLOGLE, closing: It seems to me that Dr. Morris has taken the wrong view of what I mean by preliminary preparation. I did not mean the preparation immediately before the operation, because I think that it is the height of folly to purge the patients just before operation. To have them in the best condition for operation, the preparation immediately beforehand should be very light. If you deteriorate the system, you make the patient too weak to stand the operation. We all know that we would rather operate on a patient with some pus left behind than on one in which it has all been taken out. If you have a patient getting over an attack of pelvic inflammation, the constitution is run down; and you have trouble in getting the patient back to the hospital to operate, if you

give a wrong kind of preparation. If you use the right system, however, you will not have trouble, and the patient will come through the operation well.

Regarding the point of which Dr. Morris spoke, I agree with him that it is criminal; but it is being done right along. It is being done in the small cities. It is being done in our city. The other day, three patients were operated on, not one of whom had been seen by the surgeon previously. I suppose he had all confidence in the man who had made the diagnosis; but I make it a rule not to operate on a patient that I have not examined. It is bad enough to make mistakes of your own, but it is worse to have to handle someone else's.

So far as preliminary preparation is concerned, I believe that the patient should be prepared and put in the best possible condition for operation, except in acute cases, in which it is necessary to operate immediately. Those cases are different.

DR. I. D. METZGER, Pittsburgh: There is a good deal of truth in what Dr. Replogle says about immediate operation. So flagrant had that become two years ago that it was necessary for the Medical Bureau to make rules and announce it to the hospitals that no case should be operated on within twenty-four hours, except strictly emergency cases; and if there were an investigation to be made in Philadelphia and Pittsburgh, it would be found that the hospitals do not think of doing that any more. I do not think they do in Altoona, but they do in some places.

A CASE OF CHRONIC HEMORRHAGIC PURPURA COMPLICATED BY SUPPURATIVE MASTOIDITIS.

BY

JOSEPH V. F. CLAY, M.D., F.A.C.S., AND G. MORRIS GOLDEN, M.D.

CASE: February 9, 1918, H. F. K., female, aged 61 years. Family history negative. Personal history, no severe illness. Herpes zoster fifteen years ago, also history of gastro enteric disturbance for years; was a heavy eater, and failure to get relief of her gastric symptoms caused her to become a Christian Science healer twelve years ago—we mention this fact as it has, we believe, a distinct bearing upon the case. This patient claimed perfect health until one year ago when she had a number of teeth extracted from the upper jaw be-

cause of a marked pyorrhoea alveolaris which had been present for five years. It was claimed by the patient that prior to this it was possible to express quantities of pus from the gums. Her faith, she said, kept her in health in the face of this foul condition of her mouth. The dental operation was attended by profuse bleeding for five days and terminated in the formation of a hematoma of the upper alveolar process. This under "Science" disappeared. One week later, several hemorrhages occurred under the skin in scattered areas. She had subsequent recurrences of this spontaneous, subcutaneous bleeding at irregular intervals associated with recurring attacks of abdominal pain and diarrhoea without apparent cause. During this period she lost considerable weight, about forty pounds. In November, 1917, bleeding from the nose occurred, lasting thirty-six hours. The day following developed pain in left ear and on the third day blood appeared in the left external auditory canal. The ear continued to discharge blood for one month. At this time the discharge from the ear became straw colored and pain appeared in the left mastoid region. The pain was paroxysmal, throbbing and aggravated by heat. This symptom became intolerable, and it was for the relief of this that we were called.

General examination: Patient poorly nourished, marked evidence of anaemia. Large purpuric spots nodular in character, tender to touch and very painful were observed on the left thigh, right leg and left forefinger. These spots would begin with pain, become nodular, tender and ecchymotic, gradually disappearing within several weeks. The lungs were negative. The heart was slightly enlarged, muscle tone diminished. A systolic murmur was heard in the aortic area and was of sclerotic origin. Blood pressure was, systolic 145, diastolic 85. The liver and spleen were negative. The urine showed a specific gravity of 1012, and was negative as to albumin, sugar and casts. A few leucocytes were present. The patient stated that her urine had been examined several times and was always negative. The blood examination made by Dr. S. W. Sappington, showed hemaglobin 55 per cent., red cells, 4,020,000; white cells, 4,800; polynuclears, 37.5 per cent.; lymphocytes, 61 per cent.; transitional cells, 1 per cent; eosinophiles, 5 per cent. *Blood plates were very few.* The red cell changes were very moderate, showing slight variations in size and shape. There were no nucleated

red cells and the bleeding time was markedly increased. Examination of the feces was negative to parasites and blood. The pulse and respiration were normal and at no time had there been any rise in temperature.

Examination of ears, nose and throat. Post auricular tenderness, both superficial and deep, was present and extended into the retro maxillary fossa and posteriorly to the occiput and up over the temporal regions. There was no boggiess of the soft parts and no rigidity of the musculature attached to the mastoid. The edges of the pinna were extremely sensitive to palpation. The external auditory canal contained a very small amount of straw colored secretion. The superior canal wall was puffy and waxy. The membrana tympani presented a pearly gray color with a small round, sharp edge even perforation occupying the lower anterior portion of the field through which a serous secretion exuded. Culture of this secretion taken from the middle ear cavity showed a pseudo diphtheria bacillus. Functional testing showed marked impairment and fork tests indicated an auditory nerve deafness. The right ear was normal.

The nose presented a collapsed condition of the turbinal bodies and pale mucosa. In the posterior left tonsillar arch a large sub-mucous hemorrhage was visible.

There was a paresis and disturbance of sensation of the left side of face and loss of appreciation of taste on the anterior portion of the left side of the tongue.

The ear continued to discharge the straw colored fluid and at intervals there were recurrences of the pain with sensitiveness of the mastoid. We did not deem it advisable to intervene surgically knowing pretty well that such procedure would result in marked and perhaps uncontrollable hemorrhage. Accordingly we decided to endeavor by general treatment to improve the blood condition and then operate.

Blood transfusion was advised as the best possible means of combating the condition. This was positively refused as was also the intramuscular injection of arsenic. Recourse was then had to the giving of glycerized bone marrow with Fowler's solution. Under this treatment the general condition improved, the appetite increased, subcutaneous hemorrhages apparently ceased, anaemia was less and the patient felt generally much better. During this period, hyper nutri-

tion was resorted to, homœopathic medication as indicated and occasional dose of morphia to control pains.

Three weeks later the distress and pain in the left ear and mastoid became markedly aggravated and the discharge changed in character to offensive muco purulent. The mastoid was tender and a small polyp presented in the perforation. This was crushed with a snare causing an excessive bleeding which, however, ceased spontaneously in a few hours. X-ray examination at this time by Dr. W. C. Barker was negative. The storm subsided as drainage was better, and then five days later the patient informed us that she had decided to return to Christian Science and we were discharged. Twenty-four hours later we were called in great haste. The pain in the mastoid was atrocious and radiated through the head. The patient was quite prostrated. The temperature registered 101 degrees F. (the first rise in temperature), the pulse 96. The mastoid was exquisitely tender and the soft structures thickened. We decided that drainage of the mastoid was imperative and accordingly the same day, under ether anaesthesia, did a simple mastoid exenteration. The bleeding at the time of the operation was free and clotting delayed. Free pus was found in the antrum and the roof of the antrum was necrotic. While the cells of the mastoid were broken down there was no break in the inner plate over the lateral sinus.

Great care was exercised in ligating all bleeding points in the flaps. The wound was packed with iodoform gauze and skin edged approximated with Michel clips. The operation consumed thirty-five minutes. At the end of three hours the dressings were saturated with blood. These were reinforced many times during the night and it became necessary to place a Kelly pad beneath the patient's head. The bleeding continued throughout the morning although the general condition was satisfactory. At the end of sixteen hours the dressings were removed. Large dark clots had formed under the packing forcing same out of the wound, bleeding points were active all along the skin edges and from the antral wound. Adrenalin, tannic acid, and coagulose were applied without the slightest effect. Firm packing with iodoform gauze was done and a large pad of gauze applied. It was evident that the bleeding was not to be controlled by local measures.

Enteroclysis of calcium chloride oz 1 to the pint and 5 per cent. glucose was given and one tube of coagulose subcutaneously with bovista internally. After six hours the bleeding appeared to be controlled. The temperature reached 101 degrees F. and sugar was found in the urine. This was the first appearance of sugar although repeated examinations had been made for its detection. Frequency in urination developed, the patient evacuating an ounce or two every ten to fifteen minutes. Hemorrhage into the right middle ear cavity was observed at this time, evidenced by marked dull hearing and a bluish color to the distended tympanic membrane.

Two days later bleeding from the mastoid wound became very active, soaking through many pads of gauze and towel- ing placed around the head. The patient was anaesthetized and the wound inspected. The wound was very foul, the soft structures were gangrenous and the skin edges about the wound presented a bluish-black appearance. The bleeding came from many points and continued moderately active for four days requiring several changes of dressings daily. One dose of coagulose was administered subcutaneously each day. At the end of the fifth day (or eleven days after operation) the bleeding ceased. The wound was one large slough, emitting a horrible gangrenous odor which made attention to the patient on the part of doctors and nurses most trying. The urine during this time contained an appreciable amount of sugar. Marked mental depression presented and this was rapidly followed by delirium. The blood at this time showed red cells 3,485,000—white cells 12,000—hemaglobin 60 per cent.

The right ear, which showed hemorrhage in the tympanic cavity two days after operation on the left mastoid, now started to discharge and right mastoid became tender. Anticipating operation, we administered several doses of coagulose before operating. An extensive necrosis of the right mastoid process was found, a large defect in the tegmen antri exposed the dura of the middle fossa. This wound was well dusted with aristol before packing. There was no post operative bleeding. The general condition of the patient, however, was deplorable, septic temperature, constantly harassed with intense thirst and desire to urinate every five or ten minutes relieved only by irregular appearing periods of delirium.

It was almost impossible to get the patient to ingest any food at all, prostration and emaciation becoming marked. In addition to this and, adding to the difficulties of the attendants, it was impossible for the patient to hear at all. Communications were by means of large writing on a slate.

Three days after operation upon the right mastoid it became necessary to inspect and redress the wound on account of the foul odor from the wound. A general gangrenous condition of the structures similar to the process which had occurred on the left mastoid, was observed. These wounds continued to slough requiring most patient painstaking care to keep down the horrible odor. We employed lysol, permanganate of potash, Dakin's solution, enzymol, saline solution and bromine water for cleansing. The wound was dressed every few hours carefully removing sloughing tissue that was separable. After three weeks the wounds were free of suppurating tissue and nature was exerting every effort to bring about healing. Granulation tissues appeared throughout the wound, but the very poor nutrition of the patient prevented the normal healing. Large decubita occurred in the coxygeal and occipital regions, but we had the satisfaction of seeing them heal before the patient succumbed. We cannot pass this phase of the case without lauding the excellent and untiring services of the nurses, Misses Falzman and Larson, who had charge of this patient.

The urine, which showed albumin, casts, sugar and acetone, under the ingestion of bicarbonate of soda the acetone and sugar disappeared but the presence of albumin and casts persisted. The patient gradually passed into a coma and died May 10th.

To recite the many variations in this case and discuss their occurrence would require a very lengthy communication. The patient presented new phases daily.

Our impression of the case is that we were dealing with a chronic purpura the result of a focus of infection the pyorrhoea alveolaris. The blood picture was that of a mild secondary anaemia with a decrease of the bone marrow elements. The clinical features of a purpura could, therefore, be explained on the basis of an atrophic or inactive marrow with consequent loss of blood plates and a marked tendency to a haemophilia. While through the ingestion of bone marrow and arsenic we were enabled to materially improve the blood

picture, the vital processes were so mortally disturbed that a perfect cure of the condition was impossible. We believe the occurrence of the mastoiditis was the result of hemorrhage (spontaneous) into the middle ear with subsequent low grade infection and easy breaking down of the bone through poor nutrition. The clinical history of the left ear and our direct observation of the right ear seems to bear this out.

THE WAR AND THE AMERICAN CHILD.

BY

EDWIN A. GLENN, M.D., BERWICK, PA.

OUT of the welter and horror of the world war have come many heart-sickening cries—cries of the aged and infirm driven from their homes to the privations of the wilderness; cries of the women and girls in their agony of shame; cries of the manhood and youth thrust into industrial slavery.

But of all the cries the most piteous have come from the little children, who, by reason of their frail and helpless condition, could not resist or endure the ravages of war—children slaughtered in droves in Armenia by the unspeakable Turk; children tortured, mutilated, and done to death in Belgium and northern France by the worse than unspeakable Hun; children starved and frozen in a lingering and fatal anguish in Poland; children sinking under the withering touch of noxious plagues in Servia.

We know they have died in all the countries at war, from injury, exposure, starvation, or disease, by the tens and hundreds of thousands. We fear they have died by the millions. The decade from birth to ten years is everywhere decimated; in some countries, practically annihilated.

On the other hand, how is it in America? Except for the submarine casualties, which in number are negligible, but which in their grip upon the American consciousness are beyond calculation (each baby life has meant ten thousand men in France), the childhood of America is unscathed. While everywhere else among the great nations this decade of child life is woefully depleted, in America it is gloriously intact.

What does this mean? Just this: It means that upon

the shoulders of these American children will fall in due time the greater part of the burden of the tremendous problems and responsibilities arising from the war. It means that the American child has become, by stress of circumstances in Europe, a very precious asset, not only to America, but to the entire world as well.

It follows, therefore, that in order to conserve them and prepare them for this burden, the medical profession must now and for years to come keep watch and ward over the health and activities of this decade of child life; must care for them as children were never cared for before; not with a maudlin sentimentality that would so shield them as to achieve an anemic and spineless product, but with a rational scientific solicitude that will develop a strong, sturdy, vigorous, intelligent, and peace-loving race.

How may we do this? In ways innumerable. Among them:

By perfecting ourselves in the finer details, and instructing our patients in the principles of artificial infant feeding, which seems to be so increasingly necessary.

By removing all adenoids and all diseased or obstructive tonsils.

By guarding against infectious disease through improved methods of prophylaxis and stricter quarantine.

By searching routinely for foci of infection in tonsils, teeth and nose in all our rheumatic and heart cases.

By endeavoring particularly to avoid deformities in all cases of injury or illness, and by instructing ourselves in the methods of correction of existing deformities by means of muscle training and operation.

By urging more efficient community sanitation, with special reference to the eradication of flies, mosquitoes and vermin.

By guarding against pollution of drinking water and milk and the contamination of food.

By urging improvement of housing conditions.

By supporting medical inspection of schools.

By agitating, if necessary, and actively supporting all civic projects for mental, moral and social betterment.

Along these and kindred lines which will come to your mind shall we find our duty; and though the results of our individual efforts may seem paltry, yet in the aggregate the results of the entire profession working to this end will be prodigious.

The present condition of affairs offers at once a challenge to our intelligence and an opportunity for our skill. And under penalty of having failed to serve our generation we dare not fail to accept the challenge and to meet the opportunity.

DISCUSSION OF DR. GLENN'S PAPER.

DR. GEORGE B. MORELAND, Pittsburgh: For the last year I have had experience in the inspection of school children, and in one school I inspected for the State, in the county outside of the Pittsburgh city district, it would make one's heart sick to see the physical standard that these children were in and to see the surroundings of that school and the sanitary conditions there. Most of the children were foreigners, the people that we are trying to bring up as American citizens; we are permitting them to be surrounded by such conditions as that, I cannot understand how we could expect them to turn out good citizens later. We ought to be acting as missionaries to these people, and doing things that will make them acceptable, honest, great and physically perfect. If they are well physically, they will be well mentally and morally. If we start on the physical standard, we do not need to worry about the others. I do not think this can be brought home too frequently to us. Too often we forget, and do not do the things along these lines that we should; and I do not believe that we should listen to a paper like this without some one's saying to the speaker, "We are with you." Of course, we all are; but, it is much better to say it.

DR. ANNA JOHNSTON, Pittsburgh, Pa.: The paper is so gratifying, and Dr. Glenn has expressed himself so beautifully, that we are in accord with all he has said.

THE CARE OF THE EYES OF INFANTS.

BY

HENRY L. GOWENS, JR., M.D., PHILADELPHIA, PA.

THE term infants I mean to include that period of life after what is termed new-born to the beginning of childhood. In other words from a few days after birth until the time of weaning. Or better, from the third or fourth day of age to the end of the first year.

Taking it for granted that the proper care has been

given to the new-born and that there has been no manifestation of disease accompanying birth, then the care of the eyes of the infant resolves itself mainly to proper diet.

If proper care has not been given to the new-born as to its eyes, then you may have to treat them for ophthalmia neonatorum, or for a specific dacryocystitis, or for an injury to the eyes because of instrumental labor, or for any other deformities because of lack of growth or of over-growth of certain embryological structures.

Children may be born without eyes. I cannot say just how many of these cases are on record, but I have seen two such cases shown by Dr. T. B. Holloway.

Glaucoma occurs primarily in the infant and also secondarily in the infant. The removal of the eye in cases beyond treatment is properly delayed.

Phlyctenular conjunctivitis occurs very frequently in infancy. The three main causes for its appearance are, first: in the cases of bottle-fed babies, because of the lack of care in the making up of the contents of the bottles as prescribed by the pediatricists; second: because of the poor health of the mother who insists upon nursing the child notwithstanding her poor health; and, third: the ill-fed mother from her own choice who takes her diet to suit her own peculiar appetite, not considering and willfully ignoring the welfare of the infant. This third class of cases, whether among the rich or the poor, I feel should be reported just as is done in the acute infectious or contagious diseases to the end that blindness or near-blindness may be entirely *prevented*.

Just as care is now generally taken with and against ophthalmia neonatorum, with the exception of a few States, just so I feel that specific dacryocystitis may be prevented by prophylaxis from the time the obstetrician sees the prenatal case and determines that the case is luetic.

Muscle conditions show themselves early and more so after acute diseases which break down the reserve health of the infant. It has been held by one authority that at one year of age the child may be refracted and glasses prescribed. Such a procedure would, without a doubt, lessen the end results of muscle conditions which we commonly see as the result of tardy refraction in children.

Other diseases are known in infancy, some of which are abscess of the lid, blepharospasm, chalazion, lagophthalmos,

hordeolum, ptosis, blemorrhoea of the lacrymal sac, acute and chronic dacryocystitis, lacrymal fistula, microphthalmias, acute catarrhal conjunctivitis (not from the gonococcus of Neisser), glioma of the retina, concomitant convergent strabismus, concomitant divergent strabismus, nystagmus, simple hyperopia, simple myopia, compound hyperopic astigmatism, compound myopic astigmatism, simple hyperopic astigmatism, simple myopic astigmatism and mixed astigmatism.

Nearly all of the above conditions may be successfully treated, it being understood that glioma necessitates an immediate removal of the eye as against the loss of vision from injury which necessitates waiting until adult life providing the good eye is free from tendency to sympathetic ophthalmia and is kept under observation for sympathetic ophthalmia.

In my second paragraph I refer to proper diet for the infant. I feel justified in so doing because of the great number of cases of other diseases of the eye in the infant besides phlyctenular conjunctivitis and keratitis, some of which have been cured, in all of the remainder the condition of the eye or eyes has been improved simply because the mother was referred to the pediatricist with the advice to constantly adhere to his instructions as to diet. Many cases of muscle condition would not present themselves so early and probably not at all, were it not for the problem of diet. I make the assertion that all pathological conditions of the eyes of infants in particular are made worse because of improper diet. With the wide-spread care of prenatal cases it is surprising how many seem to have forgotten their most important lesson, namely, that of infant feeding. I do not feel that these cases are not properly taught but I feel that the lack of results is due rather to the human tendency to inaccuracy.

The prophylaxis of the mother and father as I stated in my paper on "The Care of the Eyes of the New-Born" is the only means of preventing any other diseases of the eyes having to be treated during infancy but those mentioned in this paper as occurring from the gonococcus of Neisser, lues and malnutrition of the parents.

By proper care during infancy we prevent or minimize the care of the eyes during childhood, adolescence, adult life and old age.

DISCUSSION OF DR. GOWEN'S PAPER.

DR. GEORGE W. MACKENZIE, Philadelphia, Pa.: I have never yet refracted an infant in the cradle or below one year of age. I want to say that in certain cases of marked far-sightedness or far-sightedness with astigmatism, a great deal can be done to prevent cross-eyed conditions, when the trouble begins in the third or fourth year; and that child can be saved an operation at a later date. Refraction at an early age accomplishes something of more importance than improving the appearance. That is, it conserves the vision. The eye may otherwise become amblyopic from non-use; and if you put glasses on early, you can retain the vision, as well as straighten the eyes. Then there is no call for operation under eight to twelve years of age.

MODERN HEALTH PROBLEMS.

BY

DR. HUBBARD, NEW YORK CITY.

Mr. President and Officers of the Pennsylvania State Medical Society, and Mr. Chairman of the Bureau:

I wish to state that Dr. Copeland was indeed very sorry not to be able to keep his engagement with you, but in the presence of an expected epidemic of Spanish influenza, and in view of the attitude of the public toward it and the danger of its appearance in the cantonments about New York, he thought that his place was there and not enjoying himself here with you. As long as it was an educational matter, he thought that the Bureau of Education had better be represented, so, holding down that position, I was delegated to appear in his behalf before you. With your permission and indulgence, I should like to state that the title on the program is peculiarly fitted to our work, "Modern Health Problems." In New York they are about the same as in any other village, municipality or State. The State of New York unfortunately is not adapted for very much success, quickly acquired in health work. It is a long train, a long series of efforts at publicity and then a checking up constantly, so that superficially, it looks very much to the outsider as if four men were

watching one man's work. The reason is on account of our cosmopolitan population. In talking at a school on food conservation, I asked the principal how many nationalities were represented and he said, "That is a feature of our school. Each nationality carries two flags: one, ours, which the school presents, and one of their own, which they bring themselves. I will show you those represented in the Washington street school." Then as each national air was played, the children of that nationality arose and waved its flag—twenty-nine nationalities arose. Is it any wonder there are societies organized asking and practically demanding that all aliens coming to our shore must speak and understand English?

Another problem is protection against various infections. In this, we go first to the child, feeling that the child is a peculiarly susceptible individual. We attempt to protect the child from these infections, which a majority of the people have come to believe the child really must have. So much has been brought to them by family traditions and by folklore, that they really believe a child must have certain diseases, among which are measles and whooping cough. We are going through a series of attempts at education relative to active immunization against diphtheria by the Schick test and find that we must have circulars printed in twenty-seven different languages. That is one of our problems, the education of our alien population.

The next is prevention of infection. We started out some years ago on the question of avoiding promiscuous personal contact. We break out every now and then, against osculation. It furnishes opportunity for the cartoonist and the funny paper, but it brings us before the public. An advertiser said, "I can sell soda crackers and make a fortune if a firm will back me," and the Uneeda Biscuit came before the public. Mr. Kennedy, who got up the Iner Seal packages, died a millionaire. Health officers have to accept these standards and advertise.

The next most important problem on our program is child conservation. At the meeting of our National Council it was determined that in case we cannot replace the men lost on account of the war, we must conserve childhood. In conserving of child life, when is the time to begin? In New York City we start out prenatally; then during parturition;

then in infancy; then before school age; then during school age. Here we felt we must leave the child until the time of employment to a special department called our Factory Department.

Our pre-natal work consists in the education of the mothers and requiring midwives to report cases as engaged; securing names and addresses, having one nurse continually visiting the family to carry the child through until it comes to the place where it can be taken out. It is then transferred to the Advisory Clinic, popularly known as the milk station. To get people to do certain things, you must offer them something. The American is easily fooled in some respects and easily led in others. If you give people something different from others at a cheaper cost, you can lead them a long way. We offer the milk and give them the best we can buy. By special agreement with an organization called the "Milk Trust," the Health Department can sell this milk retail at wholesale prices. It costs the City of New York the rent for the places and employment, but we make a profit in public health education and our reduction of child mortality. We sell a fourteen cent quart of milk for nine cents, so if a mother requires a quart or two a day per child, she can get it for nine cents a quart. All she has to do is to register the child. We make a physical examination and a record and watch the record grow. We also get moving pictures and send a number of films to certain theatres, which show different stages of a child's life. With that amount of publicity, co-operation and enthusiasm, we hope we are going to save our quota of lives which the National Council has set for us. Our infant mortality has dropped from 184 to 88 per thousand. It has not been a rapid drop. It has been rapid in certain sections, but gradually in general, in fractions of a point. We have to make from April 6, 1918 to April 6, 1919 a wonderful showing in order to make our two points.

The next problem is that of disease prevention. We entered into a campaign regarding contagious diseases and used typhoid as an example. We have an abundance of pure water, which is examined weekly at two hundred stations. It is examined microscopically and chemically and at all times we know the condition of the water in every part of the city, where there is a possible chance of contamination. The

milk problem we thought we had solved, but the unfortunate human element entered into it. Although everything had been done by us, contamination occurred. Our law prevented the using and handling of milk bottles for any other purpose but milk. A school desired to sell milk to the students and told me that if they could bottle the milk on the premises, they could sell one hundred and fifty instead of fifty quarts, but that the milk-trust would not sell them milk if they bottled it on the premises. I told them I would get them a special permit. I asked them why they didn't buy the bottles and they said it was because of the breakage. A lady had promised to lend bottles to them if they would return them; and the luncheon counter was operated in her name. The children bought these penny lunches and penny glasses; and if they had to buy glass the breakage would cost the school too much and eat into the profit. I said, "You are not bottling milk, you are merely serving it in bottles." I called up the milk company and got permission to extend Dr. Moore the courtesy of filling these bottles and he sells 175 quarts a day. He could bottle it in advance, place the bottles on crushed ice, and give each child a bottle with a straw, thus preventing contamination. I considered it a very hygienic way of serving milk at a lunch counter. We got around the law, which prevented the bottling of milk, otherwise than at the dairy.

Typhoid in New York is more or less endemic. Our death rate is very low. We made an epidemiological study, and found 8 or 9 per cent. of the cases came in or were brought in from the outside; so we must consider that this is the best we can do. Four-tenths per cent. was our record last year. Chicago's is one and two-tenths points. We cannot expect to be entirely free from typhoid as long as discharges are thrown into a river used for bathing purposes.

Physicians are only human; and when they are called into a family, there is a contact that is more than personal furnished. There is a business agreement; the family says, "If you put a sign on my door, I will discharge you and get another doctor;" and there are other physicians who will do as the family requests. Sometimes a few of them get caught; but I do not find within the last five years a single physician successfully prosecuted in the courts of New York on that account. That is a side commentary. A lawyer is

an officer of the court of justice and is under the rules of the Supreme Court; but a physician feels that the Health Department is a big boss whom he, as a subordinate employee, can bully if found out, and if not, attempt to get away with it. I am happy to say that 95 per cent. of physicians co-operate with the Department of Health, but there is a little 5 per cent. that can give us an enormous amount of trouble. They come to grief sooner or later; but they give us a great amount of trouble in the meantime. I find it best not to hold a police attitude towards any. It is much better to educate the families. Then the physicians will co-operate with the Department of Health. Dr. Copeland is carrying out our policy. He said, "I do not wish physicians to feel that we are anything but a big advisory corporation. We must give them opportunity for diagnosing infectious cases. We are going to open schools of instruction, where physicians, if they feel a little rusty on certain topics, can brush up. So in our laboratories, we throw open the wards to the physicians. Our hospitals for contagious diseases have practically closed doors, but we have thrown them open to all the colleges. We have appointed men on this staff representing different colleges, so that students of different colleges may have instruction on the contagious diseases. Last year, I am pleased to say, of the seven thousand physicians in the city, there was an attendance of three thousand physicians in the various hospitals. That makes me feel that the work of the Department of Health in assisting physicians is only met by being able to give the practitioner something for what he does for the State. The State takes the same attitude, and is using the same methods as used in the Health Department. They are the same methods as those used by our present State Health Commissioner, Dr. H. L. Davies, who is now a pensioner of the city, after twenty years of service to it. We are reaching nine millions of people between us and are both operating conscientiously along the same policy. We feel that New York State can offer a plan of campaign for attacking these infectious problems that can be considered pioneer work. Vermont is now working on the same lines. I visited eighteen cities there last summer, and found that Dr. Caverly wanted disinterested outsiders to see the plan. He tells me it has borne fruit.

The plan can be carried forward as suggested by the representative of your institute last night, by a National Department of Health. But States guard their rights most zealously. Nevertheless, when an epidemic occurs—and none has given us more concern than the poliomyelitis in 1916, it might be a good thing if we had a National Department of Health. The duty of the municipality to the medical profession is only second to that of the physician to the municipality.

We have, as a final problem, the venereal disease problem. I have had prepared by the chief of that department a resume of what he desires presented as a part of his propaganda. I feel that we have been a little backward in not appreciating what was to take place in New York. During the Spanish-American war when there were so many troops at Chickamauga, families in the nearby city of Chattanooga closed their houses and moved away. New York City has a number of enormous encampments in the vicinity. We have in the neighborhood encampments accommodating anywhere from one hundred thousand men down to thirty-five thousand men. There are eight or nine different encampments containing soldiers from every part of the United States. New York has been the principal point of embarkation, making it particularly open to this infection. In May, one day, there were in the neighborhood of sixty thousand men, unfit for duty on account of venereal diseases. Of the different encampments the report of the Surgeon General giving the annual rate per thousand in the different bodies of troops, shows venereal diseases to the amount of 313.05 per thousand troops. In the cantonments for the week ending September 6th, venereal diseases had 457.47 per thousand. Practically one out of every two men in camp was infected. The Surgeon General also states that of the men taken in from civil life 24 per cent. had venereal diseases in one form or another—one-fourth.

Now, with this condition, we feel that we have a peculiarly keen problem which we must work out, and on which we were working when Spanish influenza came to the front. Our plan was very much after the following order: We require a venereal disease report in every case with name or initials, address, age, color, sex, etc. A comparison of the

different requirements of the various States was made. Vermont was the first to require the name. The medical profession asked for a repeal of this, because of a violation of professional ethics. The Supreme Court of New York has ruled that these are confidential records, and that no investigator can go into the Health Department and see the records; so we feel that this case was well worth the trial. The reporting of such cases gives us an opportunity to regulate by issuing a permit. We have not a plan relative to duplication, but I feel that the Massachusetts plan is the best. The doctor receives circulars in pad form and is charged with a certain number. He tears out one with a number on it and gives it to his patient, keeping the stub with the same number on it for his clinical records. If the patient goes to another doctor that doctor asks whether he has a circular; if so, he uses the same number and does not issue a new one. He sends a note to the other doctor, telling him that the man has changed his medical advisor. Our issues get duplicated from half a dozen dispensaries, as it is, now.

The next measure is in the treatment. We offer free advice and operate free diagnostic clinics. A man does not have to go to a quack, but can go to these clinics at any time convenient to himself and get necessary advice with circulars of instruction. He also can be referred to various clinics specializing in this, and from them can get the names of medical attendants, and can seek his own physician.

Regarding treatment. There is another point. Should the Board of Health be permitted to give treatment? I believe they should treat indigent cases, the same as the Board of Charities operates its hospital. The Department of Health has so ruled. Any patient that would be inconvenienced by payment is furnished with means of treatment through our Charity Department, without publicity. The prostitute who is reported because infectious and the vagrant who is fined, they send before discharged to the clinic to be examined. The clinics operate from 8.30 to 11.30 each evening. Smears and Wassermann's are taken and if the case is contagious the patient is removed to the hospital. After persons are sentenced for thirty days and are found to be in an infectious condition they are sent to the hospital. If the thirty days expire while they are still infectious, they are held until discharged by the Department of Health. We

feel that the treatment problem is not interfering with the rights of physicians.

Repressive measures have assumed all kinds of fantastic disguises: for instance, suppression of the prostitute. A policeman or public official cannot be everywhere where opportunities of propinquity give chances for infection, so it is a question of home instruction along these lines. I believe that it is a false piece of modesty to withhold such instruction, and that it is our place to go forward and teach these people in a pleasant way and let them know that it is up to them to solve these problems. Knowing this, I think that some material effect will be produced. I am sorry that we were not able to apply these methods to the problem of today: because with the false sense of patriotism inducing young people to be nice to the soldiers, there is great danger.

Five years ago we started out on the quack and have got quackery under control in New York City. We met quacks with quack methods. Our little ad in the *Evening Telegraph* alongside of old Dr. Smith's and Dr. Brown's received caustic comment from our friends; but after five years of occupying the same column we feel that it has done good. The money for the advertisement was given by one of our well wishers, who has made arrangements for another ten years' run of that ad. The way to fight fire is with fire.

In regard to patent medicines, the new nostrum law (the Shirley Amendment), I believe is the death blow of this problem. The law preventing druggists from re-filling prescriptions, and the law preventing advice by the druggist struck the keynote. I believe we can enforce the law and prevent the giving of promiscuous advice by unqualified practitioners. The license power of the State is what will keep everything under control. We must regulate every avenue by which infection may be conveyed, by restrictions regarding the issuing of permits, by following up correct, careful supervision and by seeing that the officials do their duty in a proper manner. These will constitute the solution of our problems. Having our work checked up by the War Department is a splendid opportunity to see how far our work reaches and how well it has been done, and we welcome those officials coming to New York to check up the work.

Mr. Chairman, I thank you. If I can be of any further assistance, I shall be pleased. (Applause).

DISCUSSION ON DR. HUBBARD'S PAPER.

DR. ANNA C. CLARKE, Scranton: This is a question on which I think women physicians should take a more active part. It is a subject that they can handle with women better than the men physicians can. The men physicians have their hands full, if they keep the men going straight. On the other hand, women do need education. They do need plain talk. They do need propaganda work which they will not question, and it must take away from the subject the restraint which has been placed around it so that women will come to realize the far-reaching disastrous results of these social evils. They must see that they cannot associate with fire and not be burned. They must demand before marriage a health certificate which will be general. These things will come, and the public will be taught in such a way that it will not be held as a very unusual thing to demand a health certificate. In my own practice, in the last few years, a number of girls have come asking for a health certificate before marriage, because they thought it was a nice thing to do, without realizing the far-reaching results. In each case, I have asked whether they were demanding the same from their husbands. They were not. They were astonished to think that it would in any way affect the man. The thing to do is to bring the subject to their attention in such a plain, matter-of-fact fashion as to take all the terror away from it and put it in the category of all other contagious diseases.

In our own town we have had this problem of the social evil recently, since the cantonment at Tobyhanna has been opened. It has been a serious question how to entertain these soldiers and keep the moral respect of the young women. That is a great commentary on our American men, and it is not what our soldiers go to France to stand for. They are taking advantage of the trustfulness of many excellent girls. If these men could for one moment look at themselves in the mirror which Germany will hold up as a reproach to our manhood, it would go a long way towards showing them what the outside world will think, and would have a good effect.

Where clinics are opened for men, there should be clinics for women; and wherever possible, they should be in charge

of women. I know this is asking women to go outside the work they usually do and take up a work that is purely patriotic and most far-reaching in its results.

DR. H. B. BURNS, Pittsburgh: Dr. Hubbard has covered practically the entire scope of public health work in its most advanced stage. He has covered subjects that really constitute material for a special conference of hours' duration, and it would be impossible to discuss them in detail. I will, however, just mention one thing that struck me most forcibly in his talk, and that is his brief reference to the attitude of the medical profession to the municipality and that of the municipality to the medical profession. During the growth of forward progress in public health work, there has been afforded an opportunity for co-operation between the medical profession and the municipality that has not been made available by either. The public are so concerned with the individual and what to do to rehabilitate the individual that they lose sight of the problem of the group. That is the thing they can best obviate by a getting together of the municipality and of the profession, the recognition of mutual duties and obligations, and their discharge, which is what I think Dr. Hubbard had in mind.

SCHOOL INSPECTION IN THE CITY OF PITTSBURGH.

BY

DR. H. B. BURNS, PITTSBURGH.

Mr. Chairman and Members of the State Society:

MEDICAL inspection work here is much like that in all other communities. Therefore, some of the things that I would say are general in character, and others local. It is a comparatively new division of public medicine. It is not quite twenty years old in America; at least, in its organized administrative field. Here, it is just eight years old this coming month. There has been much controversy in that period of time between this profession and those in educational work and those in charge of municipal affairs, as to where the direction in this work should lie. It is a controversy as to whether the departments in health or education

should have charge of this work. There are many arguments on both sides, and I have never heard a discussion in which a conclusion was arrived at. In the towns in the United States in which there is this work, you will find all kinds of control. In one, it is in the hands of the Board of Health; and in another, in the hands of the Board of Education. Here, it is jointly controlled by the Department of Health and the Board of Education. So far, that control has worked out admirably.

There are some difficulties, but numerous advantages. I do not know of any other municipality of this size in which this dual direction of the work exists. I want to point out briefly the advantage of it.

The school medical man is vested with the authority of both the health officer and the school officer. This amplifies his power. The health laws of the community and of the State are extremely comprehensive, and probably have never been invoked anywhere to their fullest extent. Added to that, the school laws of the State give the individual in charge of this work a full measure of power for efficient and effective work. It is probably new and interesting to all of you to have given you a brief outline of the composition of the organization in charge of this work here.

There are thirty-two school medical inspectors, men and women, the representatives of both schools of medicine. The city is divided into thirty-two districts. There are eighteen registered nurses, with ten assistant nurses who are not registered. There are eight qualified dentists, and eight dental assistants. There are, in addition to that, one medical man doing radiological work entirely, one man doing pathological work entirely, and one man making physical and medical examinations of children going to work. That, briefly, comprises the organization with which the city does medical inspection work.

It is a highly specialized field of medicine; indeed, so much so that we in charge of this work, feel that no new man coming to us, no matter what his qualifications may be, is a valuable inspector until he has had six to ten months' training in the work.

The dental organization is jointly controlled by the Department of Health, through the Bureau of Child Welfare,

of which Dr. Bentz is the chairman, and through the Department of Hygiene, of which I am director. Both of these divisions do other kinds of health work, but they jointly do this school work, to which I shall limit my talk this morning.

The function of this department is, first, the detection and prevention of the spread of contagious diseases in school children; secondly, the detection and the effort at correction of the physical defects that exist in school children; thirdly, the inspection and correction of sanitary or hygienic evils prevailing in the school buildings or school equipment; and, finally, the education of the child and of the home along these lines. These are the rather distinct and sharply circumscribed fields of work that confront these men; and in the performance of that work, they come into contact with all the community. That is why Dr. Hubbard's reference to the responsibility of the physician to the municipality impressed me so; because I have been impressed with the necessity of such a sense of responsibility, both on the part of the municipality and on that of the physician.

I will just give a brief description of all these fields that I have mentioned. The detection and prevention of the spread of contagious diseases is done largely by means of individual inspection of all the children by the physician. In that respect, the work in Pittsburgh differs from that in other large cities. There is no intervention of the nurse or teacher between the child and the doctor in Pittsburgh. The inspection is made by the physician by means of marching the children past the doctor in the best available light in the class-room. That is done at least twice a week in practically every school-room in Pittsburgh. Each school medical inspector sees practically every child personally twice a week. Those who have not come in contact with the work may not realize what an opportunity that affords the doctor for the detection of contagious diseases; but after ten years' association with the work, I can say that a trained, competent man, after such a rapid inspection, can pick out each case of contagious disease almost as accurately as a bank cashier can throw aside counterfeit money in rapidly going over a pile of bills. These selected children are then more carefully inspected in the medical inspector's room.

The medical inspector, at each of these visits, is apprised

of the children who are absent and the reason for their absence; and if anything in the reason leads to a suspicion of contagious disease, the name and address of the child is reported to the central office, and an investigator is sent to the house. It is a rule of the schools that no child absent more than three days, other than from contagious disease, can come back until seen by the medical inspector. These children are kept from the class-room until the doctor sees them; and if they exhibit symptoms of contagion, they are promptly sent home.

That is the method of preventing the spread of contagious diseases, and my experience leads me to believe that it is the most complete and intensive contribution to this work that any community can make. It far exceeds, in its immediate and its remote effect on the community, any other work done by the Department of Health. It is the most powerful factor in preventing the spread of epidemics of contagious diseases; because we believe that most of the children's epidemics are epidemics of human beings, although more pronounced in their manifestations in children.

The second subdivision of the work, the detection and correction of physical defects of children, possibly touches the general and special practitioner's field more closely than the contagious disease work. In this, a different service is rendered by the medical inspector. He carefully examines every child in his district once each year. A record of that examination is carefully made and written on a card, which is preserved throughout the eight or nine years of the child's graded school life. The examination is repeated each year, and the record is also made each year. On finding any defects marring the child's progress or general health, the medical inspector must take some action. The first thing is to send a written notice of the finding of this condition to the parent, with a request for its correction. The next is to notify the nurse. The case then passes into the hands of the nurse, and she interviews the child on her weekly visit, to find out whether the parents have done anything. If not, and if she has not learned why from the child, she goes to see the parents and ascertains whether they are unable or unwilling to provide the corrective measures required. In a municipality of this character, the great majority are un-

able. Those who are able, are urged to follow the advice of their own family physician.

Those who are unable are asked to give their consent that the municipality shall order the things necessary for the child. That consent is given in writing, and the nurse agrees to take the child to one of the local hospitals or dispensaries. The school authorities set aside a fund for the purchase of some of the things necessary, such as glasses for those with defective vision. Each year, possibly one thousand children having defective vision have glasses provided.

The third division of the work is the sanitary inspection of the buildings and equipment. At least once a year a complete inspection of the schools and grounds, with the lighting plane and the seating of the children is made. A written report is given, and the school board is asked to try to correct any sanitary evils that are found. That, in a general way, comprises the function of this organization and the medical inspector.

I want to say something about the influence of the work. That on the child, of course, is a matter of primary importance; and it is of almost incalculable value to the children of a great municipality. It would be tedious to give the statistics of the thousands of children who, in the years that this work has been in existence, have had correction of vision, hearing, orthopedic deformities, dental deficiencies, etc. Its value to these children in their improved general health and in their improved progress in school, is a thing that can be attested by every school teacher.

One of the things that I ought to mention is that classified among these defects is malnutrition, which has been found extremely prevalent in school children in all municipalities. Correction of this has taken the form of providing good milk for these children free. A pint to a quart is furnished each day. The children go from their class-rooms to an appointed room, and get a glass of milk; and their improved nutrition is extremely valuable in warding off further contagious or degenerative processes in these children.

A unique influence of this sort of work for the child is constituted by its effect on the school medical inspector himself. All men who have had experience of this kind of work

in intensive form will recognize that they have had a post-graduate course in pediatrics, in the diseases and defects of children, that is of the utmost value, and which they could have obtained under no other circumstances. The intensifying of the powers of observation and the increased opportunity for observing children in great numbers are of much value to the man who serves in the capacity for any length of time. In the eight years in which I have been in the work, I have seen a decided change in the medical inspector, partly attributable to contact with school medical inspection work.

It also has an influence on the medical profession itself. The difficulties in recording diseases were intense, ten years ago; but they are comparatively insignificant now. Perhaps 1 per cent. of the physicians of Pittsburgh do not report contagious diseases. That is the result of the training that contact with this work has given. The fact that every child absent from school has to be inspected makes it sure that every case will be discovered, and makes it certain that the case will be reported.

The influence on the public has been one that is extremely difficult to measure, but it has unquestionably been one to arouse interest in medical and public health matters and to arouse concern regarding the progress and health of the children.

I will close with just a reference to its scientific contribution. As I have said, I believe that this work has developed one aspect of contagious disease work that has heretofore been practically unknown and unreported. It has developed the very early and very late symptoms of contagion. Those symptoms I, in many years of general practice, had been unable to see; and I cannot find anyone else who had seen them until he had had an opportunity to do school medical inspection work. In other words, the scientific contribution has been these symptoms of all the contagions in the early stages and the very late stages, which the medical profession at large are entirely unfamiliar with. You are called with the diagnosis at least tentatively made in the minds of the parents or family, and you leave the care of the case when the child seems to be entirely well, and do not see it at the exereame ends of the progress of the case. These things the medical inspector sees. As the result of that, medical inspectors have

learned to recognize those extremely mild and minute initial eruptions. They have also come to see the late subsequent manifestations that have also led to difficulties with the general practitioner. That is a scientific contribution of the utmost value to the medical profession, and colleges ought to take cognizance of it. Medical men should be afforded an opportunity to see these diseases in those stages. I am convinced that most of the contagions in the schools are of these two types. The child in the early stage will show slight manifestations to family or physician, but he has the disease. In the late stage, also, there are some little sequelæ; and the child, again, has the disease. It is in these two stages that most contagions are transmitted, and it is incumbent on us to know and recognize these stages, and the danger of them. So I would say that the most scientific contribution that medical inspection has made to the profession is in bringing out and recording these heretofore unreported symptoms of the very early and very late stages of these eruptive fevers, and the opportunity to control them and limit the spread of contagion. To-day, in Pittsburgh, because of that sort of knowledge, there is less prevalence of contagious diseases of childhood and less mortality from them than in any other large municipality of the United States. That is especially true of tuberculosis. Pittsburgh is more free from this than is any other large city in the Union, and much of this result is due to one of your colleagues and fellow members, who individually examines practically every school child suspected of tuberculosis, and does it in such a way as to give the fullest opportunity for the complete and ultimate cure of that case. The gentleman to whom I refer is Dr. Edmondson, who does the radiological work for the School Inspection Department. (Applause).

DISCUSSION ON PAPER OF DR. BURNS.

DR. R. S. MARSHALL, Pittsburgh. It would seem that there is nothing more difficult of diagnosis than these eruptive fevers, in which the principal manifestations are before your eyes. I think that there are no diseases in which there have been more mistakes in diagnosis, and there is a reason for this. Our young men are not taught in a way to make them learn to recognize these diseases. They have not the oppor-

tunity. They do not get to see smallpox, scarlet fever, chicken pox and the other erythemata often enough to differentiate between them. When they are out, many have not seen them at all; so the criticisms made by Boards of Health on the doctors are not justified. I believe that the proposition of Dr. Hubbard that our doctors be given the opportunity by our municipal hospitals to recognize these diseases is of value. I believe it might be possible here in this city, when an epidemic of smallpox breaks out, to invite every doctor to attend a clinic and see cases of smallpox. I have known of men graduating from an institution that considered itself the most highly scientific in the United States, who were turned out without having seen eruptive diseases and made a sorry mess of it when it came to the diagnosis. It could be a simple thing to let them see a few of these cases. I remember seeing, a few years ago, the great Capoci in Vienna. There came before him one day a case that he very cleverly diagnosed, as I thought, *acne varioliformis*. He recognized that *acne* had the appearance of smallpox, but there was no fever or illness; and he passed the case into the ward where there were forty other patients, with that diagnosis, wishing to have the case for teaching purposes. The next day, however, he had to say that he would have to modify his diagnosis, because the case was one of true smallpox. If that could occur with one of the greatest of specialists, we should not be too critical of our young physicians. I would like to have Dr. Burns speak a minute on the feasibility of holding such clinics in our own city.

DR. H. B. BURNS, Pittsburgh, Pa.: I do not know whether I am competent to speak about this, because my services have been with the Board of Education, rather than with the Board of Health, but I think it should be quite feasible. As Dr. Hubbard says, twenty-five years ago in New York they had opportunities to see the diseases in the wards of the hospital, and we have in our municipal hospital much the same opportunity, and, in some respects, better. One of the things I have heard mentioned is that it is a pity doctors do not visit the institution in greater numbers. Occasionally they come to visit patients and are converts to the institution and its facilities.

ANTHRAX.

BY

ADELBERT D. DYE, PH.B., M.D., WILLIAMSPORT, PA.

HITHERTO, the subject of anthrax has not been of interest to the general practitioner, as but few ever came in contact with the disease, but, I believe, with the close of the war that we will be liable to see many more cases. The demand for hides, skins, bristles and wool will undoubtedly cause their importation in large quantities from such countries as China, India, Africa and South America where sanitation is not well developed, and we can then look for an increase in the disease.

Therefore, those physicians who have among their patients workers with hides, bristles, wool and bone, or those who handle these raw materials in transportation, need to be on the outlook for anthrax. Also, those doctors who are in the army must be on the outlook, as already several cases have been encountered among our soldiers, as well as in the British Army, contracted from using cheap shaving brushes in which the bristles had not been properly treated. Horsehair from Siberia and China seemed to be principally involved, undoubtedly due to letting down the bars on importation or carelessness on the part of the manufacturer. Black, or thoroughly dyed hair, seemed to have been properly disinfected, but there is a tendency to avoid high temperatures in the disinfection of white hair and of that colored to imitate badger hair.

In 1769, Foucriner of France, published the first scientific researches on the disease of anthrax, and since that time treatises on the disease both in man and animals have appeared.

In 1849, in France, an investigation was undertaken by a group of medical men, in the course of which was established the fact that anthrax in man and animals was the same. Until the Pasteur period, the influence of soil, summer heat, unsanitary condition of stables, and errors in diet were some of the causes for the disease.

In 1850 a French physician named Rayer, in collaboration with Davaine, found, in the blood of a sheep which had died of anthrax, what he called "little thread-like motionless

bodies about twice the length of a blood globule." These bodies, Robert Koch later proved to be the cause of the disease and demonstrated that the organisms passed through the two stages of bacillus and spore.

The bacillus of anthrax is a rod-like body $1/5000$ to $1/2500$ of an inch in length. Blood and other fluids of the living animal form the most favorable media for its development, at a temperature of 53.6 degrees to 113 degrees F. and a supply of oxygen is also necessary. In this media the bacillus develops by fission. Under other conditions the bacillus grows into a long thread in which the oval shaped spores appear like peas in a pod. The spore contains within itself the elements necessary for life and can subsist for years in an environment entirely devoid of nutrition, while the bacillus left to itself soon dies. The bacillus can be killed in fifteen minutes in a temperature of 131 degrees F., while the spore will take two hours broiling at a temperature of 221 degrees F. The bacillus is easily killed by antiseptics while the spore is so resistant that it is used as a test for the strength of germicides.

Human anthrax is caused by the entrance into the body of the bacillus or spore and their rapid development in the favorable media found there. In the majority of cases, the entrance is made through a cut or scratch causing (1) the malignant pustule, or (2) malignant edema anthrax. Rarely it is inhaled, and then it causes the pulmonary and gastro-intestinal types, the former being frequently called the "wool-sorters disease."

The external form which is most frequently seen begins with a red pimple, the size of a pin-head, at the site of inoculation. As there is hardly any distress at this stage the patient pays little attention to it. The pimple rapidly increases in size and becomes surrounded with a resilient swelling, often of considerable extent, the so-called anthrax odema. The pimple becomes a pustule in the center of which is a black spot and the skin surrounding is raised in blisters. This spot has a very characteristic appearance and is not forgotten by one who has seen it. The lymphatic glands in the vicinity swell and become very painful. Serious attacks develop fever, accelerated heart action, weakness, pain and delirium. If the trouble is on the neck, the swelling extends to the throat and great difficulty in breathing and swallowing develops. If the

bacilli get into the blood stream, the condition of the patient gets worse and usually terminates fatally. The complete cycle of the disease averages about nine days, but sometimes death occurs sooner.

The internal forms of anthrax are comparatively rare and are frequently mistaken for other forms of infectious diseases, only being correctly diagnosed on the autopsy table.

The gastrointestinal type begins suddenly with weakness, pain, shivering, followed by:—vomiting, diarrhoea, distention of the stomach, colic, difficulty in breathing, weak pulse, cyanosis and death usually follows with tetanic-like convulsions in from two to five days.

The pulmonary type begins with weakness, headache, profuse perspiration, some constrictive pains in the chest, difficult breathing and cyanosis develop. Auscultation shows congestion and odema of the lungs and the patient dies in collapse in from four to eight days.

The success of any line of treatment depends on a good bodily resistance in the patient, and some physicians have had success with the "expectant treatment" only. The treatment now most frequently used is medicine, extirpation and serum therapy, singly or in combination. Extirpation is done, where the location makes it possible, by the knife or cautery, and the wound treated with bichloride, carbolic acid, or iodine. Carbolic acid is frequently injected in the swelling around the wound in the attempt to destroy the bacilli there. Tonics, stimulants and easily digested food should be given and the elimination of the kidneys and the bowels looked after. Experiments are being conducted with the serum therapy, but as yet have not proven very successful. Like antitoxine, it undoubtedly must be used early to give much hope of success.

The internal remedies to be thought of are: Arsenicum, apisttel, anthricinum, carbolic acid, cinchona, echinachea, lachesis, rhus, tox., scolop, secale.

I have been called upon to treat two cases of anthrax in two years. The first was a man about 35 years old, in which the disease developed in his neck. He was treated by excision, injections of carbolic acid, and serum, but he died in four days after treatment started. The second case was a boy about 16 years old, in which the disease had developed in his nose with enlargement of the lymphatics in the neck. He was treated with excision and stimulants and recovered. Both cases developed from handling raw hides.

EDITORIAL

INSURANCE COMPANIES AND THE INFLUENZA CASUALTIES.

WE as well as our many confreres have, times without number, felt annoyance at what we regarded as pettiness on the part of employees of insurance companies in their inquiries concerning health and accident indemnities. A matter bearing upon the above has come within our personal knowledge in connection with the recent epidemic of influenza, so-called. Certain health policies have written into them the clause that no sick benefits are collectible for secondary diseases or lesions. And in another class it is specifically stated that no benefits may be paid for pneumonia other than lobar. In accordance with such provisions, it might well be a debatable question as to the security of the policyholder should he be ill with pneumonic plague.

Since the disappearance of the epidemic, we have been called upon to sign certain certificates and we have been informed that the home office is likely to dispute the claims: 1. On the ground that the patient first had influenza, and that the broncho-pneumonia was a secondary condition. 2. Because the pneumonia was of the bronchial and not of the lobar type. Unquestionably the insurance companies have had to face large losses from sick and death benefits; but that is no reason for quibbling on a question concerning which physicians have no definite knowledge. There are those of us who deny that the epidemic was of influenza such as we have known it in the past, and we ourselves are of this belief. There are excellent authorities who believe that broncho-pneumonia is present in every case from the inception of the attack, and its discovery is only a matter of skill in physical examination. Some claim that the resulting pneumonia is always lobular, and never lobar, no matter how closely conditions may suggest the latter to be the case. To dispute

claims because of a question that for the present cannot be decided on scientific grounds strikes us as short sighted on the part of companies. If their directorates have not yet taken action on the subject, they will act wisely if they inculcate some business sense into quibbling employees.

The second objection coming under the present consideration relates to making lobar pneumonia only the subject for sick benefits. We feel that such a provision should never be written into a policy. It is likely to be subjected to too many contentions. As long as it is there and the insured pays a lower premium in consequence, the final action on the part of the company must be based upon strictly business. "The insured gets what he pays for, and nothing more." Nevertheless the clinical diagnosis of broncho-pneumonia is one with dangerous possibilities. For example, many cases of tuberculosis exhibit their first manifestations by what is at first believed to be a simple broncho-pneumonia. If the benefit papers attribute the illness to broncho-pneumonia, the insured gets nothing; if tuberculosis is assigned as the illness, benefits for a reasonable time are allowed.

Again taking the clinical side of the diagnosis of broncho-pneumonia as differentiated from acute bronchitis, the greatest allowances must be made, for error is easy. It has truly been said that the clinical picture of broncho-pneumonia is like that of acute bronchitis only the patient is too ill for the latter disease. One can readily appreciate from this that health insurance companies are raising trouble for themselves and others by writing policies from which broncho-pneumonia is excluded. They should charge the full health premium and let that end the matter.

Returning to the influenza problem, there are those who believe that much of the so-called pneumonia following that disease is something else entirely. Some say that many of the cases are really examples of cardio-vascular failure.

X.-E.

THE PHYSICIAN AND THE EARNING CAPACITY OF HIS AUTOMOBILE.

PHYSICIANS are notoriously unbusinesslike. So well recognized is this fact that it has several times been suggested that colleges introduce into their curriculum a chair of Medical Economics. In scarcely any particular does the physician show greater carelessness than in his estimate of his automobile as part of his earning capacity. The funny man of some magazine, the name of which we do not just recall, told the story of a suburbanite who arrived at his home station too late to have at his disposal the regular station conveyance. Accordingly he hied himself to the nearest garage and asked the charge for taking him to his home. The reply was, "Five dollars." Being of Scottish canniness he proceeded to the house of the local physician, called him out of bed and asked his price for a visit into the country, and was told, "Three dollars." Then and there a bargain was made, and the physician and beneficiary travelled on through the night together. Arriving at the suburbanite's home, the latter said, "Never mind about getting out of the car, doctor; the garage man wanted to charge me five dollars for this trip, and you asked but three. There is no one sick I am glad to say, but I could not see why I should waste the two dollars especially as you were perfectly satisfied to work for the smaller fee." And this story speaks volumes.

On numerous occasions we have been obliged to use public conveyances in our night work, and in each case we have found that the price we were obliged to pay was more than that the average physician charges for visits at corresponding distances. In some instances we are reliably informed that physicians have foolishly made trips out of which they did not realize the actual cost of the car, including, of course, overhead charges.

As part of his business outfit, the automobile is necessary for physician and patient alike. It gives the latter prompter service at a time when he needs it badly. The physician in determining what his car costs him should first take the total mileage for the year. Next come his operating expenses, as gasoline, oil, tires, repairs, chauffeur, etc. Then the item which he rarely counts must be entered into the estimate.

This includes the original cost of the car, the interest on capital invested, the annual depreciation, garage, and possibly other items. He will then discover that the cheapest or most economical of cars cannot be conducted under five cents a mile, while the average successful doctor who likes to appear prosperous, drives a car which costs him not less than fifteen cents or more per mile.

The reader can draw his own moral, and learn a lesson if he so desires.

At a discussion of this subject we heard one physician say, "Well, if one does not accept this work at such prices some one will do so." To this we reply, "Let him do it; a physician should not utilize his diploma as an excuse for doing taxicab fees out of his auto." X.-E.

STERILIZATION OF WOUNDS.—Wright (*London Lancet*) and his associates claim that (1) it has been erroneously inculcated that every wound should be sterilized before closure; and that, therefore, primary suture should be avoided and secondary suture undertaken only after a course of antiseptics. They state that there is now no question, with respect to primary suture, that the wound taken after early surgical cleansing and resection is as good as sterile; and, with regard to secondary suture, undertaken with a wound in good condition and a purely serophytic infection, that such operative procedure, provided it leaves behind no infected dead spaces, directly contributes to sterilization. (2) It has been taught that the authors should judge of the fitness of the wound for closure by necropycocultures and direct microscopic examination of the pus. According to the authors it would be infinitely more reasonable to base the judgments on the results of biopyoculture. (3) It has been taught that suture cannot be successful in a wound containing a hemolytic *Streptococcus pyogenes*. The authors found that leukocytes can, given proper conditions, successfully combat this, and of course all other streptococci; and that these conditions can be realized in connection with the suture of wounds. (4) It has been taught that for the removal of sloughs from foul wounds chemical solvents are required. However, sloughs can be removed by tryptic ferment set free from disintegrated leukocytes, and the liberation of this ferment can be greatly accelerated by breaking down the leukocytes in the discharges with hypertonic saline solution. (5) Lastly, it has been taught in connection with antiseptics that sterilization is obtainable only by continuous or very frequently repeated application. According to Wright and his associates there is nothing to prevent any part of a wound surface which has been washed quite clear of albuminous matter being sterilized by a single application of antiseptics.

GLEANINGS

SIGNIFICANCE OF CARDIAC MURMURS.—Wilson (*British Medical Journal*) says that not very long ago practically all cardiac murmurs were regarded as evidences of serious trouble, but that, especially since the beginning of the war, murmurs have become rather generally suspected as to their significance. He discusses various physiological or functional murmurs, citing illustrative cases to show their want of serious significance. Even systolic murmurs of endocarditic origin may be of relatively slight significance when there has been little or no associated damage to the myocardium, but the determination of the true importance of such murmurs early in their development is not easy and prognosis must therefore be regarded at first. Their association with other murmurs, with pericarditis, myocarditis, and with vegetations naturally imparts a serious import to their discovery. The occurrence of auricular fibrillation along with such murmurs adds gravity to their significance. In all cases in which systolic murmurs are found a careful general survey must be made and no heart is to be condemned upon a solitary sign. The point is emphasized that murmurs which occur during the period of ventricular diastole, all being indicative of serious disease. This it may be stated as a generalization that systolic murmurs are often negligible while diastolic ones are seldom so, if ever. Mitral and tricuspid systolic murmurs are often physiological though due to an actual regurgitation of blood. The reason for their being of relatively little import, even when the regurgitation is considerable, lies in the immediate filling of the auricles from the overdistended veins through relaxation and dilatation, forward pressure in the veins, and aspiration by virtue of reduction in the intrathoracic pressure. A further reason when the murmur is mitral, lies in the fact that the nutrition of the heart is unimpaired. Aortic systolic murmurs alone are of relatively slight importance because the slight narrowing of the orifice can be readily compensated by slight hypertrophy and because the stenosis does not interfere with cardiac nutrition. The grave import of diastolic murmurs, such as those of mitral stenosis and aortic insufficiency is because of the fact that they are due to conditions which materially hamper the mechanical action of the heart and because they impair the circulation through the coronaries and hence interfere with the nutrition of the myocardium.

HEART FAILURE AND THE ADMINISTRATION OF DIGITALIS.—Flint in an interesting article in the *London Practitioner* (November, 1917) does not think the medical profession, as a whole, yet realizes the one important and scientific principle which determines the choice of case to which digitalis should be administered.

In the past, digitalis has not been given to cases of heart failure

on any scientific principle, but rather as a matter of routine, and because tradition decrees that it is beneficial.

It is very important, from the patient's point of view, that the medical attendant should be in a position to determine the nature of the heart's rhythm in all cases of cardiac failure, because digitalis must be pushed until its physiological effects are obtained, in those cases in which its use is indicated, and in some cases the drug must be continued for years, if the individual is to lead an active and useful life.

In cases of heart failure with an abnormal rhythm, not only is it necessary to cut down the exertion made by the individual, or insist, perhaps, on his complete rest, this being the main line of treatment in cases with a normal rhythm, but also to take active steps to reduce the rate of the ventricular contractions. This can only be accomplished by giving digitalis, and so producing a greater degree of heart block.

Flint very properly makes it clear that digitalis does not affect the rate of the auricles; and provided the number of auricular stimuli which are allowed to pass to the ventricles is kept under control by digitalis, the rapid auricular rate in fibrillation or flutter does not embarrass the ventricular muscle, and thereby give rise to heart failure.

Method of Administering Digitalis.—Mackenzie states that digitalis must be given in large doses and pushed until its physiological results are obtained. He recommends giving one drachm (m.xx. t.d.s.) of the tincture in the day until the pulse rate is slowed, or some of the other signs of sufficiency of the drug are observed. This effect usually occurs from the fifth to the seventh day.

Then the drug should be stopped entirely until the signs of digitalis sufficiency have passed off, which usually takes a couple of days or so, and as soon as the pulse rate begins to increase it should be administered in half the original dose. The second dosage is then adjusted until that dose is found which keeps the pulse rate fairly slow and makes the patient feel most comfortable.

The patient should, as a rule, be kept in bed during the first week, whilst the large initial doses are being administered.

Signs of Sufficiency of Digitalis.—The following signs and symptoms indicate that sufficient digitalis has been given, and that the drug should be stopped for a short time: slowing of the pulse rate to between 70 and 90 per minute; bad dreams; headache; vomiting; diarrhea; diminished excretion of urine, and the development of occasional extra systoles. If the extra systoles become frequent, it is a call for the drug to be stopped at once. The appearance of coupling of the heart beat, which is so characteristic of the administration of full dose of digitalis in cases of auricular fibrillation, is an urgent indication that the drug must be stopped at once. If the drug is continued, sudden death may occur, probably due to the ventricles entering into a condition of fibrillation. In some cases of auricular flutter, digitalis gives rise to auricular fibrillation; if the drug is then stopped, the abnormal rhythm may revert to the normal.—*Editorial, Therapeutic Digest.*

GONORRHEA IN WOMEN.—Early writers paid little regard to gonorrhea in the female. It was not until Nöggerath's observations were published in 1872 that the full significance was realized that gonorrhea in

the female, instead of being but a trivial affair, is a much more complicated and serious disease than is generally believed even today. This is doubtless due to the fact that in the male a gonorrheal urethritis is an active, and in the acute state a painful affair, the discharge being at once noticeable, whereas a urethritis or cervicitis in women attracts but little attention subjectively, and a leucorrhea may come from many causes.

The diagnosis in the female is not as easily made as in the male. As the diagnosis is usually based upon finding the gonococcus present, it behooves us to be very careful in obtaining specimens from suspected cases. Many physicians and authors recommend that the patient present herself without taking a preliminary douche. For specimens to examine for the gonococci we prefer the genital tract as free as possible from mucus and leucorrheal discharge, as otherwise specimens are usually valueless and lead to error. The bacterial flora is mixed and of countless numbers, as it is also the habitat of other diplococci morphologically resembling the gonococcus.

During an acute attack there is not much difficulty in finding the gonococci. Later, however, during the chronic state this is far from being the case. At this time they are found only after thorough search under favorable conditions, and then in smears made from secretions or exudate from vulvovaginal glands, urethra, cervix, Skene's glands or other small glands presenting a small gonorrheal macule.

Our routine method is to clean the surface over mouth of duct of Bartholin's gland, compress gland, take smear of pus or secretion that oozes from the duct, trying to avoid as much contamination as possible from surrounding surface. In case of urethra, insert forefinger into the vagina, compress urethra against symphysis, withdraw finger using firm pressure against urethra. This usually gives good specimens. For specimen from cervix swab out and free from tenacious mucus. Then compress cervix, or use a dull curette. Take specimen with small swab or syringe. It is sometimes best to take specimen from Bartholin's glands with hypodermic needle and syringe.

If all of these specimens are free from pus cells, we are not apt to find the diplococcus of Neisser present. The finding of pus cells indicates taking specimens following menstrual period or after use of some mechanical or chemical irritant, followed in about forty-eight hours with more specimens. It is a good policy, where pus cells are found from urethra or Bartholin's glands and no gonococci present, not to tell the patient she is free from gonorrheal infection, but say the specimen does not show germs that cause the disease and to be positive will require examination of many specimens.—*Northwest Medicine*.

SERUMS AND VACCINES.—We have said the recent graduate is short on therapeutics, notwithstanding the increased time devoted to the study of medicine. In fact, in some medical colleges the study of materia medica and therapeutics has been dropped from the curriculum.

Scientific medicine has reached such a limit that no medicine is given unless a serum is known. In fact, they so long have become accustomed to following the dictation of so-called authority that they have lost faith

in medicine, even though their own clinical experiences have taught them the value of some drugs. The recent experience in pneumonia and influenza has demonstrated the truthfulness of this statement.

The journal from which we have quoted in previous editorials sounds like a warning against the use of serums and vaccines in influenza. "The germ has not been as yet isolated, hence a specific serum or vaccine can not be made." Yet we read of boards of health using a preventive serum. "Sufficient time has not as yet passed to demonstrate the usefulness of such prevention." It has not stood the test of clinical experimentation—no, not even of laboratory experimentation. They are using a "mixed vaccine containing pneumococci, streptococci and influenza bacilli," with the hope that it may be of value. Further: "How slender the basis for this anti-influenzal vaccination when it is considered that the real nature of influenza is still unknown."

"It is probably safe to say that nothing on which to rely in the future can be learned from the indiscriminate vaccination going on. There is, therefore, no basis on which promise of protection from vaccines may be made. They may be harmless, but they may or may not be of preventive value."

We hear and read much about empiric medicine and empiricism. We see many remedies that have stood the test of clinical observation for years condemned as useless, because they have not stood the laboratory test—yes, even some that have stood the laboratory test—yet we wonder how far from empiricism is this indiscriminate use of serums and vaccines in influenza. It is empiricism. We believe there is danger in their use, and we wonder how much of the pneumonia and fearful fatality in some localities is due to their use. Fancy, the injection of pneumococci, streptococci and influenza bacilli into a healthy man to prevent influenza!

We have yet to learn of the use of serum or vaccine to prevent pneumonia, and we have yet to see the successful treatment of pneumonia with a vaccine or a serum; yet pneumonia is the most frequent and fatal complication of influenza. Yet this is our boasted scientific medicine—the product of our A+ colleges. Seven years of study, to be left floundering in a "slough of despond" when confronted with a crisis or condition.

Personally we feel that our profession has miserably failed in the present crisis, and we wonder how much of our failure is due to therapeutic nihilism and the blind following of the dictum of authority, the loss of initiative, the personal equation in medicine.

The tales filtering through from the camps are a blot upon scientific medicine. We know and fully realize that the epidemic caught the authorities short of assistance—in fact, they were simply overwhelmed; yet we feel that the nihilistic spirit, the unreasonable, foolish acquiescence to the dictation of the laboratory expert is partly to blame for this failure. How much of the pneumonia was due to the use of these serums and vaccines we will never know.

Oh, Science, what follies are committed in thy name!—*Editorial, National Eclectic Quarterly.*

THE ETIOLOGY OF FIFTY CASES OF DRUG ADDICTIONS.—By Carl Scheffel, M.D. The following is a study of the etiological factors involved in the causation of the drug habit in a series of fifty patients voluntarily presenting themselves for treatment for the purpose of being freed from the clutches of the drug to which they became addicted.

The offending drugs include bromides, chloral, cocaine, heroin, opium and morphine; the latter named being the habit-forming drug in forty-one of the fifty addictions. The statements as to the causes of their addictions were obtained as a part of the patient's medical history, and were verified whenever possible by the physician referring them for treatment:

| Etiology | Drug. | No. |
|-------------------------------|----------------------------|-----|
| Asthma..... | Morphine | 2 |
| Biliary Calculi..... | Morphine | 3 |
| Chronic Gastritis..... | Morphine | 1 |
| Chronic Dysentery..... | Morphine | 1 |
| Chronic Dysentery..... | Opium | 1 |
| Chronic Headaches..... | Morphine | 4 |
| Chronic Headaches..... | Heroin | 1 |
| Chronic Headaches..... | Bromides and Chloral | 1 |
| Chronic Vomiting..... | Morphine | 1 |
| Chronic Appendicitis..... | Morphine | 1 |
| Chronic Rheumatism..... | Morphine | 1 |
| Duodenal Ulcer..... | Morphine | 1 |
| Dysmenorrhea..... | Morphine | 3 |
| Insomnia..... | Morphine | 5 |
| Insomnia..... | Chloral | 1 |
| Luetic Stomach..... | Morphine | 1 |
| Brachial Neuritis..... | Morphine | 1 |
| Neurosis of Stomach..... | Morphine | 1 |
| Overwork..... | Bromides | 1 |
| Post Operative Adhesions..... | Morphine | 3 |
| Renal Calculi..... | Morphine | 1 |
| Sciatica (Chronic)..... | Morphine | 1 |
| Social..... | Morphine | 3 |
| Social..... | Cocaine | 1 |
| Treatment for Alcoholism..... | Morphine | 5 |
| Treatment for Alcoholism..... | Chloral | 1 |
| Tri-facial Neuralgia..... | Morphine | 1 |
| Tri-facial Neuralgia..... | Heroin | 1 |
| Traumatic Neurosis..... | Morphine | 1 |
| Unknown..... | Opium | 1 |
| Number of Causes | | 23 |
| Varieties of Drug | | 6 |
| Number of Patients | | 50 |

From a careful study of the above table it becomes at once apparent that insomnia and various types of recurrent headache rank foremost in the list of etiological factors. There seems to be, in the light of our modern therapeutic knowledge, no good reason why morphine or any other habit-

forming drug should be resorted to in the treatment of insomnia; and yet every one of the six cases cited were given the drug to which they became addicted, by physicians for the relief of insomnia before they finally resorted to its use of their own initiative.

Next to insomnia as an unjust cause for which morphine is very frequently administered is the treatment of alcoholism. To be sure, jabbing morphine into a patient recovering from the effects of "the night before" may be the easiest way for the physician to relieve his patient; but when cognizance is taken of the fact that this procedure is apt to be repeated over and over again, and that it directly caused 8 per cent. of all the drug addicts in the table above, it becomes apparent what a really dangerous method it may become to the patient. Creating a morphinist out of an alcoholic is simply pulling him out of the frying pan and throwing him into the fire.

Many physicians, and most laymen, have the impression that most drug addicts are a type of social outcasts who became addicted to the use of narcotics of their own accord. Nothing is further from the truth than such or similar impressions. From the table—which presents a good average of the etiology of drug addictions—it will be seen that about 92 per cent. of all addicts were caused either through the inability of the profession to relieve or cure difficult chronic conditions; or by the careless and promiscuous administration by physicians of dangerous habit-forming drugs over long periods of time, and many times in conditions where habit-forming drugs were not absolutely indicated.

Out of the fifty patients only 8 per cent. resorted to the use of habit-forming drugs entirely of their own accord, not due to some form of illness for which they were first given some form of dope. Two of these addicts were males, and two were females; all were below thirty years of age, and all were of a high intellectual type. One of the males drifted into bad company and commenced by smoking opium in the slums, later shifting to morphine for a "stronger sensation." The other male became addicted to the use of cocaine as the result of frequenting a house of prostitution whose inmates all used it. Of the females, one was a prostitute and the other a woman who used to attend regular "dope parties," at which a number of girls and women would regularly meet to "shoot dope and sniff snow." Of these fifty patients, eleven, or 22 per cent., were physicians.

What lessons may we learn from the foregoing figures? In the first place, and it cannot be too strongly emphasized, physicians are making more addicts to habit-forming drugs than the profession would like to admit. Most hypnotics and practically all analgesics that are given internally may be habit-forming under certain conditions. They should be used with extreme caution, and not promiscuously as is now only too often the case.

In insomnia and allied conditions it is not justifiable to give veronal, trional, bromides, chloral, or the opium derivatives over long periods of time, even though so doing may be easiest for the physician and for the time being most pleasing to the patient. Past experience has repeatedly demonstrated that insomnia, nervousness and allied conditions may be

efficiently combated with other therapeutic agents than the dangerous administration of habit-forming drugs.

Where pain is the dominating factor, its cause should, if possible, be removed. As may be seen from the table, conditions producing various degrees of pain are by far the greatest etiological factors in producing drug addictions; and for the same reason morphine is the most frequent drug resorted to. Not always is it possible to subdue pain by ordinary means, and, in many acute painful conditions a hypodermic of morphine is the only appropriate remedy. It is in the chronic conditions associated with more or less continuous or recurrent pain that extreme caution is called for in the administration of habit-forming drugs. It is nothing unusual to see some chronic condition treated with morphine until the habit has been established, which might have been remedied by surgical or other means. Various forms of colic and dysmenorrhea, are often the cause of drug addiction, only to be cured after the removal of renal or biliary calculi or proper gynecological treatment. Why not remove the cause first instead of making the sufferers slaves to drugs only to require surgical interference eventually?

It is true, all physicians cannot be expected to be expert diagnosticians; neither are pain-producing conditions always relieved by means other than the use of morphine; but to those dealing with drug addicts it is apparent that there is a tendency on the part of too many physicians to administer analgesics or sedatives promiscuously rather than to take the pains to make exhaustive diagnostic investigations or to utilize time-consuming therapeutic measures.

There is no denying the fact that almost all hypnotics and analgesics, if used any length of time, will produce in most patients a desire for more, provided they temporarily relieve them. If one physician refuses to repeat the prescription, the other very likely will. What usually follows is that if the patient is able to learn what he is taking it will be only a matter of time before he will obtain and use the drug himself—and so another drug addict is created!

The various hypnotics and analgesics are not safe in the hands of the laity, and when our table shows 22 per cent. of physicians to be the victims, it may be safely stated that such drugs are not safe for self-administration by patients of any class.—*Medical Record*.

MAGNESIUM IN THE TREATMENT OF CANCER.—Recently a French surgeon announced that for a considerable period he had been using magnesium internally as a post-operative remedy for cancer. It was also pointed out that foods rich in magnesium could be used under the same circumstances. The surgeon did not go fully on record, but his results appeared to be encouraging. From quite another angle the subject came up in a recent session of the Paris Academy of Medicine. Regnault had noted the effects of the magnesium salts when used locally on certain warts. With this as a starting point, together with the fact that the defensive zones about neoplastic tissue are magnesium-bearing, the author began the use of magnesium hydrate and silicate internally—from 20 to 25 cgm. of each twice daily. He tested this treatment in papilloma, epithelioma, and inoperable cancer. It must be remembered that silica is

one of the alleged favorable remedies in epithelioma and is or was used extensively in the Czerny Cancer Institute as an internal as well as external remedy. Regnault reports excellent results in papillomatous formations and superficial epitheliomata, while in inoperable cancer he claims arrest of growth and relief from burdensome symptoms. After operation he administers inwardly the silicate of magnesium in the aim of preventing recurrence. Something depends on the mode of exhibition because the response of the organism to a drug may be such that its good potentialities may be sacrificed. He, therefore, gives the remedy five days and then skips five.—*Medical Record*.

NEW PATHOLOGY OF SYPHILIS.—Martin states that the gumma is not the essential typical lesion of old or latent syphilis. It is a relatively rare formation; and the great majority of cases of syphilis run their course without the formation of gummatous granulomas. Warthin says that the new pathology of syphilis is based on the demonstration that the essential tissue lesion of either late or latent syphilis is an irritative or inflammatory process, usually mild in degree, characterized by lymphocytic and plasma cell infiltrations in the stroma particularly about the blood vessels and lymphatics, slight tissue proliferations, eventually fibrosis, and atrophy or degeneration of the parenchyma. These mild inflammatory reactions are due to the localizations in the tissues of relatively avirulent spirochetes. Syphilitic inflammations of this type occur in all tissues and organs; but are most easily recognized in the nervous system, heart, aorta, pancreas, suprarenals and testes. The syphilitic is a spirochete carrier. Syphilis tends to become a mild process; but at any time the partnership between the body and the spirochete may become disturbed, and tissue susceptibility or virulence of the spirochete become increased so that the disease again appears above the clinical horizon. Immunity in syphilis depends on the carrying of the spirochete. The disastrous effects of syphilitic infection usually require a period of years for their development. The pathologic diagnosis of syphilis is essentially microscopic.—*Amer. Journal of Syphilis*.

THE DIAGNOSIS OF PEPTIC ULCER BY THE ROENTGEN RAY.—Baetjer and Friedenwald arrived at the following conclusions after a study of 743 cases:

1. The X-ray offers most valuable assistance to the diagnosis of peptic ulcer, and although this method is not yet sufficiently well developed to be relied upon without entering into the clinical aspects of the disease, it is of the greatest diagnostic help in obscure cases.

Positive X-ray findings are noted in about 84 per cent. of cases of peptic ulcers and in 79 per cent. of cases operated upon.

2. In duodenal ulcer there is excessive hypermotility of the stomach with rapid evacuation of the contents, so that the greater portion is extruded within the first half hour; there is hypermotility of the duodenum with formation, usually, of a deformity which remains fixed in all of the examinations.

3. The diagnosis of gastric ulcer is dependent upon two conditions, namely, the functioning of the stomach, and the finding of the filling

defect. It is only when the filling defect is situated along the anterior surface of the stomach and along the anterior surface of the lesser and greater curvatures that it can be demonstrated. On the other hand, it matters not what the situation of the ulcer is, the functions of the stomach are materially affected. We have in this condition an excessive irritation from the ulcer, with consequent hypermotility and a spastic condition of the pylorus, so that for the time being there is practically no expulsion of bismuth. It is only when the spasticity relaxes that a portion of the bismuth is expelled. In gastric ulcer, wherever its situation, we can always look for a certain amount of retention of contents. There is always a more or less marked hour-glass formation. According to our observations the functional signs are often as important as the presence of the filling defect in arriving at definite conclusions, inasmuch as in 8 per cent. of our cases, although there were no defects found, the functional changes pointed definitely to ulcer.

4. The greatest difficulties arise in the diagnosis of complicated cases; that is, when adhesions are present. These so frequently mask the usual findings that it is often impossible to determine whether there is really an ulcer of the stomach at hand or a lesion of some other organ. When the ulcer is situated at or near the pylorus, signs of partial obstruction frequently aid in establishing the diagnosis.

5. The X-ray affords an almost absolute means of differentiating between gastric and duodenal ulcer.

6. By means of the X-ray examination we can generally rule out the presence of ulcer.

7. We can approximately determine the degree of healing as well as recurrence of an ulcer which cannot be as certainly determined in any other way.

8. One can obtain sufficient evidence as to the extent and induration of the ulcer and degree of obstruction to guide us, in a measure, as to the necessity of surgical intervention.—*Bulletin of Johns Hopkins Hospital*.

NON-OPERATIVE TREATMENT OF NASAL SINUSITIS.—To the *Pennsylvania Medical Journal* for February, 1918, Vansant contributes a paper bearing this title.

If Vansant should be asked to outline the steps of a conservative treatment that, in his opinion, would promise the greatest success, it would be as follows: After a very careful examination and diagnosis, and, if possible, removal of intranasal obstructions, the nasal chambers should be cocaineized, nasal plugs saturated with argyrol and glycerin inserted and allowed to remain in place until active discharge ceases; this should be followed by the use of the suction apparatus. After this, an effort should be made to force medicated fluids or vapors into the sinuses either with the Coffin apparatus or the hot-air syringe. All this treatment is carried out in the office. For home treatment the patient should use a cleansing wash, and the general practitioner should institute whatever general treatment is necessary. If the above treatment does not obtain a favorable result in a short time, vaccine hypodermic injections should be added to the local treatment. These in-

jections are usually given in the office and should be repeated every three or five days.

Finally, no one wishes to claim absolute cures from any treatment, either surgical or non-surgical. We should always remember that a tissue, once damaged, is generally more liable to future trouble than before the damage; also, that the thorough eradication of a local sepsis, situated in deep cavities, is a very difficult matter, but the above-mentioned treatment has placed many patients under Vansant's care in a condition entirely satisfactory to themselves, with total absence of pus discharge, and they have continued to remain in the improved condition.—*Therapeutic Gazette*.

RESUMPTION OF SELF-SUPPORT BY WAR CRIPPLES.—Gourdon is chief of a rehabilitation center, and reports his experience with 5,014 maimed soldiers with grave and incurable lesions. Of these, 73 per cent. have resumed their former occupation with or without prostheses; 27 per cent. required vocational training. Only 30 per cent. were crippled in the arms. War cripples seem to lack will power more than others, and they tire more readily. Persons accustomed to till the soil formed 62 per cent. of the total, and they return to farm work more readily than others. Fully 85 per cent. of the farmers and 48 per cent. of the farm hands spontaneously returned to farm work after being supplied with prostheses for the purpose. The loss of an arm does not incapacitate more than 25 per cent., and disarticulation of the shoulder more than 50 per cent. Amputation at the thigh causes about 50 per cent. incapacity. The incapacity from loss of a leg is not over 10 per cent. in industrial work. With loss of a hand or arm, the amount of work turned out increases of course with practice, and hence it is advisable to place the men early in workshops. Very good office positions have been found for the maimed capable of such work, and their interest and progress in training were remarkable. They realized in nine months what the others required sixteen for. He advises a premium for rapid acquiring of skill based on the professional skill acquired compared to the extent of the lesion.—*Bulletin of the Academy of Medicine, Paris*.

THE MEDICAL TREATMENT OF INFLUENZA.—The editor of the *National Eclectic Quarterly*, referring to circulars issued by the U. S. Government regarding the recent epidemic of influenza, says:

We have said that all the circulars but one were silent regarding treatment. The one mentioned advised aspirin in five-grain doses and then advised against the indiscriminate use of aspirin and phenacetin. Today we saw a circular which is being freely distributed which advised or contained a prescription containing phenacetin, aspirin, salol and caffeine, all four in one prescription. The popularizing of these drugs with the laity is fraught with danger, and reminds us that in the former epidemic antipyrin, antifebrin and acetanilid were the popular remedies, and to our mind were responsible for the large number of deaths from heart failure at that time.

Our sovereign remedies during the present time were aconite, asclepias and gelsemium. Occasionally other remedies were used when complications occurred. The principal ones were bryonia, lobelia, phosphorus, ipecac and macrotys, named in the order in which we found them necessary.

We believe that these remedies, used in conjunction with the directions

given in that part of the pamphlet, "What should be done by those who catch the disease," will lessen the complications and hence the mortality. We have learned from experience that the one thing necessary in this disease is to keep the patient quiet in bed until he or she is well.

TREATMENT OF SEPTICEMIA BY PASSIVE INTRAVENOUS INJECTIONS OF SACCHARATED SERUM.—Audain and Masmonteil (*La Medicale*) attribute to this activated serum a leucogenic function, since the count rises very shortly after the injection from 5,000 to 7,000, to 25,000, indeed, in less than half an hour, and was continuous for two or three hours; it then dropped to 16,000. There is a transitory elevation of temperature, .7 of a degree, usually heralded by a heavy chill and followed by a drenching sweat. The value of the injection is based on its power to inhibit the formation of the leucocytes. Moreover, it is distinctly nutritive since the daily injection of 100 grammes of sugar distinctly adds to the patient's resources. Finally, it has a diuretic action and is a stimulant. By employing isotonic solution there is no fear of a hemolytic action. Glucose, saccharose, or lactose may be employed. Which-ever is used should be isotonic—i. e., 47.60 to 1,000 for glucose; 103.50 to 1,000 for saccharose; 108.90 to 1,000 for lactose. Usually from 300 to 500 grammes are injected at first. Later when patients are profoundly septicemic and have had previous treatments from 1,000 to 2,000 grammes may be injected daily, given in two or three doses. The test of the quantity to be employed is based on the leucocytic count. This should be driven up to about 25,000. Another sign of adequacy lies in the development of a heavy chill.

The authors state that they have not treated many cases, but that the results obtained are very encouraging. They consider the treatment as long as twelve days with heavy doses, and have observed a fallen temperature and pulse-rate, free diuresis, and the development of multiple sterile abscesses. Treatment is not stopped until fever has disappeared four or five days.

TOXICITY OF PREPARATIONS OF ARSPHENAMIN.—In compiling the comparative results obtained by the administration of the different preparations of arspenamin, Sargent excluded all cases in which more than 0.6 gm. or less than 0.3 gm. of the drug was used because patients receiving more than 0.6 gm. of any of the preparations seldom escaped reaction, whereas no reaction was noted in those receiving less than 0.3 gm. of any of the preparations. The French preparation "arsenobenzol billon" was used in but a limited number of cases because of the expense and difficulty with which it was procured. The use of the new arspenamin ceased after the first batch of five doses because of its apparent extreme toxicity.

Of seventy-seven doses of diarsenol there resulted 35 per cent. gastro-intestinal reactions and 1.05 per cent. vasoparetic reactions. Of ninety-seven of "arsenobenzol" there resulted 5 per cent. gastro-intestinal reactions and no vasoparetic reactions. Of nineteen doses of "arsenobenzol billon" there resulted 25 per cent. gastro-intestinal reactions and no vasoparetic reactions. Of five doses of the new arspenamin there resulted 60 per cent. vasoparetic reactions.

Sargent concludes that gastro-intestinal reactions resulting from the administration of arspenamin are largely the result of impurities in the drug. Vasoparetic reactions resulting from the administration of arspenamin are

entirely the result of impurities in the drug. Of the four preparations of arsphenamin commonly used in this country, the Philadelphia preparation "arsenobenzol" has the preference by being distinctly the least toxic.—*American Journal of Syphilis*.

TUBERCULOUS MESENTERIC GLANDS.—Carson (London) believes the condition is more common than is generally believed. Its apparent variety may be explained by the fact that unless complications occur, the symptoms are so elusive, or rather point so indefinitely to any particular disorder, that they are classed under the general term indigestion and no attempt at differential diagnosis is made. The main symptom of pain which is due to spasm of the affected segment of small intestine and its character is absolutely typical. It is a sudden centralized abdominal pain severe enough to make the patient cry, lasting about fifteen minutes or less, relieved by pressure or hot applications, recurring perhaps two or three times per day, and stopping as suddenly as it began, so that in the intervals the patient is quite free. In some cases the pain occurs every day, in others only at intervals of a month or so, the attack lasting two or three days. Vomiting occurred at the time of the pain in thirteen of the thirty-nine typical cases. The condition must be differentiated from appendicitis, stone in the ureter, digestive disorders, intestinal parasites and lead poisoning. The author's treatment was surgical operation.—*Abstr. International Abstr. Surgery, Surg. Gyn. and Obs.*, Vol. xxvii, 385.

THEODORE J. GRAMM, M.D.

COBRA REACTION IN THE DIAGNOSIS OF CARCINOMA.—Farmachidis (Italy) in 1915 published his first experimental results on the utility of the cobra serum reaction in the diagnosis of carcinoma. He has since continued the study. By adopting a suspension of red cells from rabbits instead of guinea pigs the author obtained the following results: In 64 cases affected with carcinomatous tumors there was more or less hemolysis within 24 hours and hence positive reaction in 53. In the remaining 11 cases the reaction was long delayed. In 62 cases with non-carcinomatous affections there was no reaction by the cobra venom solution. The author concludes that since cobra venom almost constantly activates hemolysis with serum of carcinomatous subjects toward the red cells of guinea pigs and rabbits, while such hemolysis is absent in non-carcinomatous subjects, the reaction may be considered as specific for carcinoma and is thus of great use in clinical diagnosis.—*Abstr. Int. Abstr. Surg., Gyn., and Obs.*, Vol. xxvii, 412.

THEODORE J. GRAMM, M.D.

VISCERAL SYMPTOMATOLOGY IN NERVOUS DISEASES.—Dercum (Philadelphia) says the specialist of to-day, in order to avoid the danger of acquiring a narrowed horizon, should keep in touch with the other departments of medicine, including neurology. Both in functional and organic nervous diseases, the affections may express themselves by visceral symptoms, or by symptoms that simulate visceral disease. Errors in diagnosis and consequently in treatment are frequently made, and not infrequently, when the symptoms are referred to the abdomen, grave, unnecessary and wholly gratuitous operations are performed. The

author classifies the functional nervous affections into neurasthenia, the neurosis of chronic or persistent fatigue; psychasthenia, an affection made up of a pre-existing neuropathy plus nervous exhaustion; hysteria, the disease of suggestion; and lastly, hypochondria, in which the patient suffers from a fixed conviction of illness. In neurasthenia, the pain and tenderness which may exist in the abdomen is not so severe as in inflammatory conditions, ulcer or other organic trouble. Nausea is infrequent, and vomiting quite rare. It is important not to give the local symptoms a value which they do not possess. In hysteria it is noteworthy that with digestive symptoms apparently severe, there is little impairment of nutrition. The pains of hysteria are purely superficial and commonly disappear under deep pressure. In psychasthenia visceral symptoms are the exception. In hypochondria the patient's complaints may lead to erroneous diagnosis. In organic nervous diseases, especially in tabes, vomiting, etc., have often led to exploratory operations. The same is true in brain tumors, every case of obscure pain should be subjected to a careful neurological examination.—*Abstr. International Abstr. Surg., Gyn. and Obs.*, Vol. xxvii, 397. THEODORE J. GRAMM, M.D.

SURGICAL VERSUS MEDICAL TREATMENT OF GOITER.—E. V. Smith (*Wisconsin Medical Journal*) classifies goiter in three groups, exophthalmic, toxic adenomatous and colloid. In exophthalmic goiter, the treatment should be primarily medical. Every means should be employed before resorting to surgical treatment. Among these are absolute rest, ice bag over the heart, and a diet as protein free as possible, with abundance of carbohydrates. The overactive metabolism should be inhibited as far as possible. Hyperthyroidism is often self-limited. Cases may exist for a number of years and gradually improve. Patients at the height of an attack of hyperthyroidism should be treated by non-operative measures until the severity of the intoxication has begun to subside. . . . In the toxic adenomatous group there may be two types of symptoms, those due to chronic poisoning, and those due to pressure. When the latter symptom is present the patient should be given relief by operation. In cases of chronic intoxication, many factors should be considered before advising removal of the gland. It is often advisable to reduce blood pressure and rest the heart for a period of three or more weeks before attempting operation. In no type of case does pre-operative treatment produce such gratifying results as in toxic adenomatous goiter. With colloid goiters, medical measures often produce wonderful results. The simple colloid goiter which frequently develops at puberty in many instances responds rapidly to external or internal medication with some form of the iodides. Many disappear before adult age if nothing is done. The true colloid goiter seldom causes pressure symptoms unless complicated with adenomata. But it may cause disfigurement so that for cosmetic reasons alone an operation is advisable. There can be no doubt that the thyroid gland plays an important part in both the mental and physical development of the individual during adolescence. There should be less surgery and more non-operative treatment used in the case of those patients.—*Abstr. Int. Abstr. Surg., Gyn. and Obs.*, Vol. xxvii, 299.

THEODORE J. GRAMM, M.D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

OBSERVATIONS AND VERIFICATIONS.—About a third of a century ago the old homœopathic doctor of my native town was having a sign made. As the redundant parts of the gold leaf from which the letters were made fell to the floor, the good doctor picked up some of the fragments and triturated them with sugar of milk up to the fourth decimal potency. Some time later Burnett's work on "Gold as a Remedy in Disease" appeared, and the old doctor perused its pages with diligence born of a desire for knowledge and proficiency. Having prepared the medicine and acquired a knowledge of its effects, he required but one more factor to complete the evolution of his purpose, namely, a patient whose symptom-complex most nearly corresponded with the morbid perspective presented in the pathogenesis of the remedy. Fortunately for both doctor and patient this final factor was soon forthcoming. Mr. H., formerly a patient of the doctor's, but for some years past a resident of a neighboring city, wrote stating his condition as follows:

"The right testicle was greatly enlarged and indurated. It measured seven inches in length and ten inches in circumference, and was 'as hard as a board.' It had a smooth, even surface, and, aside from the sense of weight, which the increased size would necessarily entail, was practically painless. (The above, nearly all of the important data being there, is not verbatim in Dr. Taylor's article as it was not in parenthesis)."

He had consulted several of the most prominent old school doctors and surgeons in the State, and their unanimous verdict was that the only help was in operation and removal of the testicle. In this dilemma he wrote to the old homœopathic doctor, who had formally been his physician, asking for his opinion. The doctor did not offer any opinion, but sent him a few powders of that aurum metallicum 4x, prepared with his own hands, and asked to see him soon. In two weeks he presented himself at the doctor's office, and the testicle was then beginning to soften in one place. This continued and after several weeks it regained its normal size and function, the entire transformation being accompanied with less than a dozen powders of aurum metallicum 4x. I knew the doctor and the patient and can vouch for the correctness of all that is herein stated.

Just here let me refer briefly to a case cured by Dr. Lippe in this

city (Philadelphia). The patient, a woman, was caught in a drenching rain, after which the menses were suppressed, and there was a general and persistent decline until she was bedridden. Many good homœopathic prescribers had tried and failed. They gave her *rhus toxicodendron*, *pulsatilla* and *calcareæ carbonica*, etc., led to these remedies because of her getting wet. They were treating the rainstorm instead of the patient, and failed. Lippe found twitching and jerking of muscles, burning pain along the spine and those two symptoms added to the ill effects of suppressed discharges made a symptomatic tripod upon which *zincum metallicum* may rest secure. This remedy was given in a high potency, and the patient was permanently cured. It is a mistake to attempt to base a prescription on external influences, or etiological factors. Not what *happened* to the patient, but the *effects* of what happened are the indications for the remedy. The etiology, like the temperament, may be suggestive, but never indicative. The symptomatic expression of the patient's deviation from his normal condition must be ever the basis of all correct prescribing.

Mr. J., aged 70, had for a long time suffered with frequent attacks of cardiac asthma. He would wake after midnight with much heat in the chest and upper part of the body, violent palpitation of the heart and great dyspnea. After uncovering the chest he would feel better, and the paroxysms would subside. Patient had a pronounced cardiac affection, with its attending consequences, a chronic rheumatic state, characterized by twitching, jerking pains, stiffness of affected parts, and a general aggravation in damp weather. Many years before he had taken large quantities of quinine, which left him with an enlarged spleen, ringing in the ears and partial deafness. Several remedies were tried with unsatisfactory results. Finally, in going over his case again, he remarked that the "slightest exertion seemed to ameliorate the condition." Just the motion of putting off the covers seemed to ameliorate the condition and he would go to sleep again. Here was the key to the situation. *Ferrum metallicum* was now given by Dr. Taylor, with marked relief and permanent improvement of the asthmatic condition, and he lived in comparative comfort for many years. When you have asthmatic conditions to treat, that are better from the slightest exercise, do not forget *ferrum metallicum*.—*Transactions International Hahnemannian Association*.

DR. E. A. TAYLOR, (Chicago).

BRANDS OF HOMŒOPATHIC PRESCRIBING.—Observation of the manner of prescribing drugs by many homœopathic physicians leads to the comments suggested by the title of this editorial. The stocks of remedies maintained by modern homœopathic doctors often compare quite favorably with those of the average pharmacy, in the kaleidoscopic therapeutic camouflage which adorns the overburdened and groaning shelves of the medical sanctum. With some physicians the doctrine of signatures, as evidenced by a veritable chromatic color scheme running through countless bottles and vials of multitudinous shades, seems to be the guiding spirit of remedial administration. Thus yellow pills betoken that the liver of some hapless patient is to be the object of attack, while pink pills suggest the sanguinary thought that an increased mobilization of

vigorous red corpuscles is to be attempted. This kind of medical practice certainly has a sort of beatific simplicity to commend it, and indeed the adept in it soon finds himself a slave, as it were, to a most absorbing game. Only those are disqualified from taking part, who are hopelessly color blind, a fault we believe which few physicians have.

Others are impressed by the advantages of co-operation and apply this principle to their favorite drugs. Combination tablets offer an attractive vehicle in which to ride this hobby, and the most marvelous and ingenious drug concoctions are dispensed by the devotees of this most popular fetich. Truly here we have therapeutic artillery developed to a high degree of skill, by means of which the homœopathic rifle of the simple brand has given way to remedial shrapnel of startling and various effects. Something, somewhere, somehow, is sure to be hit! Of this we may be certain; but when the smoke of battle has passed away, the damage inflicted may be greater than the advantage gained.

Still other prescribers of recent years have turned to elixirs, decoctions and tonics of ancient lineage, and these fluid remedies we understand, threaten to nullify the best intentions of our prohibition friends. As thirst assuagers these seductive liquids (we had almost said liquors) are most pleasant to imbibe and arouse, we are led to believe, a degree of stimulation quite vinous in character; wherein the patient finds himself in one long continued state of exaltation so long as he continues to indulge the alpha and omega of his therapeutic tipple.

Yet other physicians, and these form a rapidly disappearing minority, conservative in their natures and beliefs, persist in doddering along, adhering to the good old fashioned homœopathic triumvirate, *simile, minimum, simplex*. Hours are spent by them in poring over musty volumes of *materia medica*, laboriously searching for the open sesame which shall reveal to them the restoration to health, of their trusting patients. Repertoires are thumbed backward and forward, pages of symptoms are written, careful comparisons are made, and finally a few little contemptible sugar pellets are placed upon the patient's tongue.

Then watch the marvels of homœopathy unfold themselves, note how disorder and riotous pathological elements resolve themselves into orderly physiological units and how once more life's harmony is restored in all its pristine vigor. Great indeed is the mild power of true homœopathy, and still greater the satisfaction of him who employs that power wisely and well.

Yet all methods in use by physicians of the homœopathic school seem to have their strong adherents and the therapeutic jumble which frequently masquerades as homœopathy is bizarre indeed. What is needed is for most of us to go back to the real old fashioned, straight homœopathy of the fathers, when simplicity and firm faith prevailed. Twentieth century life is rapid and full of quick changes, which at times carry us completely off our feet.—*Editorial. Homœopathic Recorder.*

HOMŒOPATHY BRIEFLY DESCRIBED.—The inquiry is made frequently for a brief statement of the salient features of homœopathy. To define or describe a science, a system or a method in a few paragraphs is diffi-

cult if not impossible. One grows into the understanding of subjects by studying and applying them; however, the following are put down as some of the most important distinctive points of homœopathic medicine condensed to a few sentences under separate heads:

1. Homœopaths believe that medicine, if properly selected, will cure diseases.

2. Homœopathy is a method of selecting medicines according to scientific rules.

3. Definition. According to the homœopathic rule for selecting a medicine, it is necessary that one be chosen which has been proven capable of producing a train of symptoms, when tested upon a well person, similar to the train of symptoms existing in the patient for whom the selection is made. By clinical application at the bedside, in hospitals, in clinics of medical schools, in doctors' offices, in military service, in institutions for the insane and under all other possible circumstances this principle has been found so dependable that those who employ it sometimes refer to it as a law of nature; for instance, like the law of bodily growth, the laws of distribution of the causes of diseases, or the law that usually causes like to beget like. It is the scientific rule for selecting the proper remedy for a sick person.

Though the system of medicine called homœopathy has long since developed into an adequate as well as an exact method of drug selection, additions are steadily being made to it, confirming its universality of application. Vaccinations, serum therapy and antitoxins, so generally recognized as recent pharmacological discoveries, are distinctively, homœopathic in their actions.

4. The single remedy. It logically follows from the first paragraph of the foregoing (2) that only a single remedy can be indicated in a specific case at a particular time. Scientifically, but one choice can be made because but one thing at a time can be completely or the most completely applicable under a definite group of concrete conditions. Homœopaths do not employ mixtures of drugs because mixtures are uncertain of best effects. The tendency of thoughtful practitioners is to discriminate and select a single active ingredient for a prescription.

5. The minimum dose. It is a well recognized therapeutic principle that an excess of a drug can defeat its own power to benefit; if not so, it can over-power by its poisonous effects the reactive capacity of the patient and injure rather than relieve him, no matter how good the intent may be of the one who administers it. Conclusively it follows that too much will aggravate: just enough of the right thing will benefit. This principle is one of the fundamentals of homœopathy. No real homœopathist has been guilty of poisoning his patient or starting him in a drug habit. The rule is, medicines act upon delicate vital structures and functions in all degrees of strength. The more accurate the correspondence between the drug symptoms and the disease symptoms, the smaller may be the dosage.

6. Individualism. No two organisms are exactly alike. If they were one individual could not be distinguished from all others. It is by differences that we discriminate. A disease may attack a number of people and affect each quite differently. A disease, separate from the one diseased,

can not be treated. To prescribe for a disease and not for the one who has it, is in line with the old doctrine of signatures; yet very much in vogue. It must be insisted upon that it is a person as he is disturbed by an ailment that is the candidate for treatment. For example, it is not of first importance to a homœopathist, so far as his treatment is concerned, to tell him that one has pneumonia. What he must know is how the pneumonia affects the one who has it. Pneumonia, like all other diseases, affects many people differently. It is the person's individual pneumonia that will, by his complex of manifestations called symptoms, indicate the kind and the amount of medicine to be given. Therefore, the choice of a remedy depends upon the indications for it by the symptom picture presented in a particular case.

Loeb says: "Every cell of the body has a chemical character in common with every other cell of that body * * * * and this particular chemical group differs from that of every other individual of the species." This being the physiological fact, all can not be affected alike, although the bacteriological or pathological character of the existing cause be the same. The complex or total of all the symptoms which a patient has individualizes him as such, and by this individualization and determination of all his abnormal manifestations the corresponding remedy is indicated.

7. Diagnosis. The homœopathist must be an expert in two kinds of diagnoses. He must, by thorough diagnostic procedure, find out what is the matter, so as to be able to tell his patient the nature and name of his ailment. He must, by a similar procedure, determine when the symptoms produced by some drug that has been proven and the condition produced in the patient by the disease, correspond unto each other as face to face so as to administer the proper remedy.

8. Provings. Were homœopathy a veterinary system, and there is a veterinary application of it as well as a human, experiments to ascertain the action of drugs, not upon sick animals, but upon well animals would seem not only reasonable but necessary. Ordinarily, medicine is a human affair, consequently it must regard the human subject and experiment upon it. Its great labors of investigation have been to determine the action of drugs upon well people. Were the objects of experiment not well and uninfluenced by disease, there could be no uniformity or standardization of findings. Of course, in making tests, limitations are observed and risks safeguarded so as not to injure the subjects. The tests that have been made of drugs upon normal human beings are called "provings," and they have been sequentially arranged and classified into the most intensive materia medica in the world.

9. Pharmacy. Homœopathy is exacting in regard to the purity of its medicines. It employs very many medicines not readily obtained from the ordinary drug trade because they must be from fresh, green plants. It has a definite scale of drug strengths based upon a scientific decimal system. The practitioner is a specialist in therapeutics and must have his preparations in an unmixed, unadulterated and simple form specially prepared. The pharmacist must make them according to rules of special procedure and send them out, when not in full standard strength, according to the uniform scale of dilutions.—*The Polycrest*.

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THE MODERNIZING OF HOMŒOPATHY.

BY

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A PAPER bearing the above title was planned for our local society at its April meeting of the current year. Fates, however, decreed otherwise, for in March I was requested to open a discussion on another subject, so that the carrying out of my original plan was indefinitely postponed. When our Dr. Clarke invited me to prepare a paper for your bureau, I consented, and announced as the subject of the discourse, "The Modernizing of Homœopathy." Needless to say no medical body is better able than our State Society to consider or debate a question having the important bearings possessed by the one under consideration. However valuable or worthless may be the suggestions of your essayist, he represents but himself, and his views can become authoritative only after criticism and approval of the membership of our honorable body.

My title suggests strongly that I think that homœopathy

needs modernizing, which suggestion is correct. The only point in doubt is the extent to which we must alter our platform or our methods to effect the result. For present purposes, the term modernizing may be defined as such alteration in our materia medica and its practical application as to bring it *en rapport* with the advanced state of the collateral medical sciences.

The fundamental principles of the homœopathic school as originally stated by its founder may be summarized as follows:

1. The law of similars.
2. The employment of drugs for the cure of disease only when their actions had been thoroughly studied upon healthy human beings.
3. The abandonment of polypharmacy, otherwise stated as the selection of the single remedy.
4. The administration of minimum therapeutic doses of the curative drug.
5. To the above may be added the existence of an unknowable something formerly entitled defective "dynamis," but considered at the present day as predisposition to disease, defective resistance, or lowered immunity.

If, then, these are the cardinal principles of homœopathy, how can our system be modernized, for each and every one of them is now universally accepted by medical men everywhere. Homœopathic physicians are no longer regarded as an inferior order of mankind, but command the same high degree of respect that is accorded the members of the dominant school.

Homœopathy is to be modernized by strict adherence to its fundamental principles and by discarding certain practices amounting almost to parasitic attachments foisted upon it by too zealous and enthusiastic adherents on the one hand, and its opponents on the other.

I. THE LAW OF SIMILARS ITSELF.—Hahnemann himself never made a greater claim for it than the only law for the application of drugs to the *cure* of disease within limitations. One of his latter day critics referred to Hahnemann

as a wise man, and that he had missed a great discovery in limiting the application of his law to mere drugs. Originally nothing was ever stated to prove or intimate that the law of similars was of universal application, to-wit, that it would cure everything. In fact, it was admitted that it had its limitations. This fact is now recognized by all of us. Individually we have decided differences as to the extent or number of the exceptions. Such variations in opinion must necessarily exist by reason of the fallibility of man. This calls for tolerance respecting conflicting views while years and experience bring us nearer to unanimity. This particular phase of my subject is not only of itself a big question, but it brings up numerous subordinate matters. Permit me to mention just one: The use of local medicaments in addition to constitutional treatment in the management of skin diseases. Individually I would take the affirmative to this proposition by claiming that the physician should use any and all aids to cure, providing such collateral measures are incapable of doing harm. Of course, instances may be quoted in which such measures have worked damage when not indicated; but the same may be said of the internal administration of remedies. Such instances speak rather for the ignorance of the practitioner than for the worthlessness of the practice.

Homœopathy is admittedly inapplicable to cases demanding surgical intervention. This is as old as the hills. But the list of surgical limitations must depend upon accurate knowledge of the etiology and pathology of each individual case of illness coming under the supervision of the physician.

As pathology advances and becomes accurate, homœopathy modernizes itself by accepting the situation, and adopting a true science as parts of its principles. When that time comes, and in a measure it has already arrived, our materia medicists will utilize it in their investigations without laying themselves open to the charge of "riding the pathological jackass."

Also with pathological advance the application of homœopathy to the treatment of disease may become more limited. At the same time, equal advances in a more accurate materia medica will almost certainly increase the scope of remedies in other directions.

2. THE EMPLOYMENT OF DRUGS FOR THE CURE OF

DISEASE ONLY WHEN THEIR ACTION HAS BEEN THOROUGHLY STUDIED UPON HEALTHY HUMAN BEINGS.—This principle of the homœopathic school may be regarded as intensely modern; indeed, it may be accepted as still in advance of the times. When it was first promulgated by Hahnemann, it was looked upon as quixotic. Even now animal experimentation is considered to be the ideal by leading pharmacologists, as enabling the research worker to push the study of the drug to an extent not possible otherwise. Hirschfelder, of Minneapolis, a teacher of pharmacology, has taken the advanced position of the homœopathic school and advocates (*Journal of the American Medical Association*, August 24, 1918), not only observation of drug action upon healthy human beings, but impresses us with the necessity of insisting that medical students acquire a knowledge of *materia medica* by experimentation upon themselves personally. In the discussion that followed the reading of this paper, Torald Sollman observed, "Dr. Hirschfelder is fortunate in being able to work out the application of pharmacology to clinical problems with students and their friends as experimental 'animals' and deserves encouragement." "The student . . . is much more impressed by experiments done on human subjects than by what he does on animals." "The collateral reading of original literature should be encouraged as much as the crowded condition of the curriculum permits." Lackenbach, of San Francisco, directed attention to the character of material among Hirschfelder's students and characterized them as "some very raw material in the shape of naval students and hospital apprentices, and it would be very interesting indeed to know how these young men respond to his methods of teaching which, I am informed, are very practical. One of his students, one of our boys, who was with us about three years, and who had acquired considerable knowledge along certain lines, was very enthusiastic." . . . "These are raw youths: in many instances, perhaps, having had no previous experience along these lines." It would impress me that the unsophisticated character of Hirschfelder's students should make them unprejudiced observers of symptoms and drug action, the rationale of which they can learn subsequently from their teachers. — "Rawness of material" becomes a drawback only when not recognized by the director

of the experimental laboratory. The remarks of Meltzer, of New York, were aside from Hirschfelder's subject matter. His observations which interest us the most include the following: 1. Numerous patients get well without any drugs; but it should be kept in mind that they get well not by accident but by definite treatment, the treatment consisting in the use of newly formed antibodies." 2. "The pharmacologist should keep in mind that one and the same drug may have a profound effect on pathologic states and have no effect whatever in a physiologic condition. An antipyretic may reduce a temperature from 105 degrees to 99 degrees F., but it will not be capable of reducing the temperature even by one degree when administered to a normal individual. You may give a large dose of alcohol to an infected patient without producing any signs of intoxication, while only a small fraction of that dose may cause intoxication of a healthy individual." "Pharmacology should be taught for its practical application first, and for knowledge second."

Just as homœopathy is ultra modern in its demand for human experimentation, so is it behind the times in not giving a practical acknowledgment to the value of observations made upon the lower animals. Still we are making progress. From the very beginning, we have paid due respect to the literature of the subject, but until the matter was taken up by Hinsdale of Columbus, Watters of the Evans' Institute, and the Directors of the Hering Laboratory in Philadelphia, our own studies were very limited. Hinsdale has very properly stated animal experimentation as furnishing about 10 per cent. of available knowledge, and this limited amount as educational or explanatory of and supplementary to the information acquired by observations upon humans.

It is a fundamental principle of homœopathic practice that the results of drug action shall be recorded as symptoms. Hence it is that our materia medica consists of a record of symptoms as an exposition of drug effects. In the beginning only symptoms produced by drugs were given position. Later, it was claimed that symptoms which disappeared following the administration of a remedy should receive recognition, and accordingly they were accepted and tabulated as "clinical symptoms." The combined result has been an accumulation of drug symptomatologies of such magnitude that no human

mind is capable of grasping them. The vast majority of them were placed on record so many years ago, that no one is able to tell with certainty whence they originated. It is with respect to this vast symptomatology that homœopathy demands its principle modernization. This fact has been claimed and received more or less extended recognition for the past fifty years. Some of these symptoms are valueless because they lack sufficient confirmation by reason of having been produced with insufficient regularity in the various drug experiments. Others are not stated in language to give a proper conception as to their value. Some few are absolutely ridiculous, and how they became matters of record is beyond the ken of many of us. What is needed is a systematic effort such as is now in effect at Columbus under Hinsdale, and in Philadelphia, under Haines and Griggs, to produce a *materia medica* that can be accepted as 100 per cent. accurate and also be within the capacity of the average human mind to assimilate. The difficulties are great, but they are not insurmountable.

The task is so enormous that it cannot be completed within a generation unless the number of men working at it is greatly increased. This means of necessity an ample endowment amounting to hundreds of thousands of dollars. *Materia medica* research is no less expensive than that relating to cancer, contagious diseases, tuberculosis, etc. With the limited financial resources at their disposal, I feel that the men above mentioned have done good work.

Their work has been hampered in a measure by a small number of men who are as obtrusive as they are few. I have listened to the *materia medica* reformer report on his observations while near me on the benches were a couple of men indignantly referring to the essayist as a crank, while a few more outspoken did not hesitate to say openly in debate that the new teaching was little less than crass treason. In other words, we must modernize by suppressing intolerant review or discussion of *materia medica* investigators. If they prove our present ideas to be wrong we should be grateful; if they prove them to be right, we have all sufficient cause for self-congratulation. Intolerance is not in keeping with modern scientific spirit.

One little experience well illustrates the care which must

be exercised in describing symptoms. A couple of years ago at my clinic, a patient coughed. I requested the twenty students sitting in the first two rows to describe that cough in writing, and send their notes to me under seal. I received no less than nineteen different descriptions of that cough. Undoubtedly part of the discrepancies was due to inattention by students; but much more was due to the so-called mental point of view. There was sufficient in the experience to prove that care be taken as to the care of phraseology in pharmacologic literature.

Homœopathy, despite this severe criticism, must be acknowledged as ultra modern in that it has long regarded the subjective symptom as the most delicate test available to indicate disturbance of function on the starting of a pathological process. It has furthermore been ultra modern in its demand for a differentiation of symptoms according as they are the mechanical result of pathological changes or are symptoms peculiar to the individual case or illness.

Homœopathy has been modern in that it advocated symptomatology as the basis of therapeutics, a principle that has but few opponents among the leaders of professional thought in all countries. Likewise homœopathy originated the axiom that the patient and not the disease by which he is labelled shall be treated. Or as it has been expressed by a prominent old school clinician, "It is just as important to know the kind of a patient that the disease has got hold of, as it is to know the disease the patient has got."

3. THE SINGLE REMEDY.—Polypharmacy is to-day a thing of the past in scientific medical circles. Among old school physicians, a man's ignorance of *materia medica* is regarded as in direct proportion to the number of drugs he writes into a prescription. We have nothing to modernize here. In fact, the leaders on the other side are getting so perfect that we must take care lest we lag behind.

4. THE MINIMUM DOSE that will cure is another universally recognized principle. The only difference is that the minimum dose of one man is greater than the maximum dose of the other. Here we open up the potency question. When one bears in mind that severe pathogenetic effects are possible from the 4x of egg albumin and the 12x of tuberculin, we can afford to view the question in a catholic spirit.

5. When it comes to the question of DEFECTIVE DYNAMIS, personal dyscrasia or constitutions, we open up a question first presented by Hahnemann as a generalization of the laws of immunity as recognized to-day and now under study by the laboratories throughout the world. To-day immunity has advanced to such a state that generalizations are no longer permissible as we search more and more into the individual factors.

In view of Hahnemann's writings on this subject, long anticipating any suggestions by modern laboratory investigations, I believe we may claim for this point that homœopathy has again been ultra modern.

I have now reviewed the various data upon which our argument is based, and upon four out of the five, I have shown as far as a short paper can go, that homœopathy is fully up-to-date. The failure of our materia medica to meet our principles is where we are deficient, and we can, if we will, rise to the situation. The disposition to-day is to develop therapeutics in all directions excepting that relating to drug administration. In fact, it may be said in all seriousness that a respect for the beneficence of internal medication is looked upon by many as evidence of professional weakness. This view has reached such an extreme among the laity that a great group of drugless healers has been foisted upon the community, and these men by reason of their deficient knowledge of the medical sciences are capable of doing considerable harm; active harm because of misdirected energies in individual cases; passive damage because people are taught to avoid the legitimate practitioner. The legitimate profession seeing the favor extended his uneducated inferiors becomes discouraged, and he deteriorates in scientific efficiency, and perhaps adopts quackish methods.

The remedy for our backwardness is the development of pharmacology to date and then do it more. Unfortunately this is a labor that is monumental in comparison with the many studies that have been pursued in the large endowed laboratories of the country, of which the Rockefeller Institute in New York is a brilliant example. Well can we appreciate that the investigations require men of the highest mental type, money, decades of time, and above all SYSTEM. Observations that are to stand for accuracy for all time can-

not be made and established in a day. With 10,000 physicians working intelligently and consistently to a common end, results are possible. Indeed, if 10,000 physicians, working according to the best of their individual abilities should in the course of ten years establish 10,000 facts, the final result would be great; and yet, gentlemen, it means but the tenth of a fact per annum per physician. Call it the drop of water to the ocean if you will, but remember, gentlemen, that it is the drop and is not to be despised. The ocean cannot exist without the drops. How many of us have established a tenth of a fact per annum? Ask yourself the question in all seriousness. Then admit also that we have followed one of two courses, namely: accepted a voluminous *materia medica* on faith, or have drifted into unhealthy skepticism.

This, perhaps, sounds severe; I believe it is too severe, because I know that it is contrary to all common sense that a body of men like the physicians of this country is incapable of establishing one-tenth of a fact per annum per man. They do establish much more than this but they do not give it to their confreres, or they so minimize the value of their labors as to consider it unworthy of consideration by their fellow-laborers. Let us all plead guilty to save time.

Furthermore, let us cultivate a spirit of tolerance in medical discussions, or better, perhaps, let us when debating medical essays stick to the writer's propositions. Remember that the audience is tired by circumlocution.

Lastly, permit me to speak of the clinical side of investigation. Bear in mind, please, that unless the clinical results confirm the laboratory, the latter is useless. It is just as subtraction fails to confirm the addition of our schoolboy days. Clinicians are just as much research workers as are the laboratory men. As a class, physicians generally have been very derelict in this respect. Let me illustrate by a concrete example, and the remedy shall be *bryonia*. It is probably incontestible that every one present has full faith or belief in the reliability of that portion of the *bryonia* symptomatology relating to chest pains, pleurisy and pneumonia. How many of us on the other hand can state the experimental evidence upon which that symptomatology is based? How many of us know how to go to literature to read over that evidence? Those of us conversant with some of our modern literature

know of Hinsdale's experiments on animals proving so far as animal experimentation can prove that the bryonia chest symptomatology is reliable.

Is it too much to say that physicians in active practice prescribe bryonia 500 times annually? If not, then a physician of thirty years' experience has made 15,000 prescriptions of that drug. But he is not able to enrich our literature by publishing the results of his observations. While he has faith in the value of the medicine, he is unable to express that confidence excepting in a most general sort of a way. Let his records of his cases be kept systematically, and let them be indexed, and what a paper he could prepare! And there are many remedies other than bryonia which are capable of verification in the same way. But, gentlemen, this has not been done by anyone, because we have not taught our students to take records. We have even been more criminal in that we have belittled the importance of the careful and systematic case history. Our hospitals have been especially remiss in the past, but there is a future.

Again, let me illustrate, and we may take as concrete examples such common diseases as tonsilitis, pleurisy and pneumonia. And let us be able to tabulate personal and hospital experiences in the strictly medical treatment of the same. Take the first named on the list, tonsilitis, a very important matter at the present day, when specialists are advocating enucleation as a remedy for local health and an infallible means of preventing nearly all systemic infections. First let us be able to present systematic reviews of our experiences with belladonna and the mercuries, and I am sure we have all had the experiences: and many of the adherents of homœopathy to-day came to us because of their individual experiences in obtaining a degree of health by our medicines when heroic measures previously employed had failed. Let us be able to tell by our hospital records the real clinical course of pleurisy. Let us be able to say something about pneumonia in its remedial management. Can we at Hahnemann do it? No, not yet, but we are getting ready, and before long we will be able to say something of value. It has only been within five years that we have had a registrar, and it is only with the beginning of that period that hospital internes could be convinced that history taking was not ignoble

clerical work. Not only will we be able to do this, but we will be able to study actual conditions as they exist and not as they are supposed to exist. False idols will be destroyed. True ideals will appear in their places.

In closing, permit me to add that the foregoing does not by any means exhaust the subject. Many points are left open for discussion. Some offer reasons for legitimate differences of opinion; while numerous others permit of no dispute. The whole question is of scientific interest and not a personal matter. As homœopaths we are still physicians just as Republicans and Democrats alike are patriotic Americans in our common cause against the World's enemy.

DISCUSSION ON DR. BARTLETT'S PAPER.

DR. HENRY I. KLOPP, Allentown: Probably some of us do not realize that a number of our homœopathic medical schools are no longer in existence. For example, the Boston University School of Medicine has gone over to the "Old School," with a Chair of Homœopathy, the excuse for this given being that they could not get any students unless they did this. Now there is something decidedly wrong, and the wrong is with the men at the head of the school. They do not teach good, pure homœopathy. Some of us have been so unfortunate as to have had to listen to professors on homœopathic materia medica that gave us nothing but ordinary every-day rot. That is expressing it pretty strongly; but I think that by doing so, we know what we mean. I believe that our specialists are partly at fault. Dr. Bartlett has brought that out very clearly; for example, when he alluded to the history-taking and to the surgeon's operating for appendicitis. There is very little thought shown by the specialist to prescribing the homœopathic remedy. The one thought of the surgeon is to operate; and of the nose-and-throat man, to treat that particular condition. How often do they prescribe a simple homœopathic remedy?

Another point which Dr. Raymer spoke of, is the reliability of the homœopathic pharmacist. Dr. Bartlett commented upon our gullibility in being taken in by the pharmaceutical agent who comes to us, and accepting anything that he may tell us. Will you tell me why our homœopathic pharmacists to-day are peddling nothing but combination drugs? I say "nothing but" advisedly, because when they

present their sample case, it is found to be made up of combination drugs—not less than three, and more often four or five combinations. To my mind, the trouble is with the homœopathic physician. He is either too lazy or too indifferent, and very often pleads lack of time, to study his case and the remedy applicable to it. Therefore, our homœopathic pharmacists to-day do the prescribing for the physician. They even label the bottles with the names of the diseases and the symptoms to which the remedies are applicable. All that the physician has to do, when the patient comes to him, is to get down the bottle labeled as the proper one for the symptom diagnosed, and prescribe that combination drug. I am sorry that an institution such as that of which I am at the head is not doing one-hundredth part of the investigating and studying that it should. I do insist, however, on prescribing a simple remedy, and do not mean that a combination shall be prescribed. A short time ago I refused to buy anything from the agent of a homœopathic pharmacy because there was nothing but the combination drugs.

DR. GEORGE J. ALEXANDER, Philadelphia: I rise in the defense of other specialists. I want to say that I know that the specialists, the nose-and-throat specialists, do prescribe the simple homœopathic remedy. I know three of them that do it, and they are three men who are of consequence. I want to say, also, that if you take the trouble to make an observation or examination, you will find the record taken when the cases arise in all their offices. The third thing I want to say is that if Dr. Bartlett or any other man will show me where the homœopathic remedy will cure a chronic tonsillar disease, I am here to be shown. I do not say that it cannot be so, but I have never seen it do so; and I am willing to be shown.

DR. GEORGE B. MORELAND, Pittsburgh: I am not a teacher of materia medica, and therefore I feel that I can stand here without any embarrassment and say that I have attended the State Society meetings for twenty odd years, and that I do not believe I have ever been at a meeting where someone has not criticised the teaching of materia medica in our colleges. I can remember an occasion when a man occupied a certain length of time in reading a paper along that line, and in it incorporated a statement about one of the residents in one of our hospitals here, who did not know the remedy to prescribe for a patient who insisted on

sticking his feet out of the bed; yet that man had been taught that iodide of potash is a valuable remedy when applied to the disease that we all know it is applicable to. I feel that as we grow older and accumulate experience, we act to the medical student and the doctor who has not his experience in the hospital very much as we do to children when they do not recognize the common affairs of life that we know and think they should recognize. We criticise them for not doing the things that we unconsciously do, as the result of our experience. I believe that, as a general rule, our medical students are getting good stuff in the colleges. I think that we should recognize the fact, if we have been practicing twenty or twenty-five years, that a lot of the material that we use is not strange to us. The picture of the disease, as compared with the picture of the remedy, comes to us so easily that we prescribe the proper remedy readily. We should be charitably disposed to the younger men, who have not got the point where we have got by the experience that a large number of cases in a long period of years has brought to us.

DR. D. N. LANDIS, Perkasio: There is just one point in the paper that I should like to criticise, and that is that Dr. Bartlett seems to estimate the homœopathic physician as being about as good as the physician of the dominant school. If that is the position of our society, I think I should get out of it and get into the allopathic society. I consider that the homœopathic physician is a better physician than the physician of the dominant school; and I know that our specialists are actually keeping records and notes of their cases. The case histories are written out, but more for the operator than for the prescriber. If most of our cases were properly prescribed for, there would be very little operating to be done. If proper treatment were given for enlarged tonsils, there would not be much operating for them.

DR. JOHN G. WURTZ, Pittsburgh: I would agree with the last speaker. Yesterday afternoon Dr. Hunsicker, Dr. Krusen and I had a conversation, and Dr. Krusen brought out a good point. He said, in defense of the specialists, that when a man goes to a specialist he comes from the general practitioner, and the specialist assumes that the general practitioner has gone through the materia medica from A to Z in his case. That is why the specialist starts with operating, rather than with homœopathic prescribing.

Dr. Alexander says that the specialists keep case records.

Maybe they do in private practice, but if you look at the nose-and-throat records in any hospital, you will find written repeatedly, "T and A," and in the gynecological records, "D and C." That is all the record they take in the cases. All you know in cases of tonsilectomy is the name and age of the child, and the operation performed. The specialists give no family history, and do not state the symptoms complained of. They could do that work, if they would, but they leave it to the internist, the general practitioner, who has to study his cases by their symptomatology and apply the remedy on the basis of broad science.

DR. GEORGE J. ALEXANDER, Philadelphia (speaking for the second time): I should like Dr. Wurtz to come to the West Philadelphia Homœopathic Hospital, and I will show him that all the records in hospitals are not like those to which he refers. I will show him the records of all the dispensary cases taken from birth, including the diseases of childhood, and right on up to operation, with all the particulars of the diagnosis, etc. The reason that you do not have your records in the hospital more generally is because, in the first place, the hospitals do not supply you with clerical aid to take these histories. A man going into the dispensary and making the examination, getting the symptoms, treating the patient, operating, etc., has no time to write it all down; but this can be done with very little extra help, and it should be. It is done in our place, and could be in others, if the hospitals were ready to supply the clerical assistance.

DR. H. P. REPLOGLE, Altoona: I think that the kernel in the nut-shell is this: We can build up a much more scientific medicine than we have to-day. When I was in college, we spoke of serum therapy, vaccine therapy, etc. Now when you get down to the real foundation, you know that serum therapy and vaccine therapy are really homœopathic. It seems to me that there is a constant argument between the internist and the surgeon, and specialists in general; when all should be working together, they are not. In the line of prescribing, if you were to take the materia medica to-day, hunt up symptoms, and prescribe according to the old homœopathic materia medica, and if you would prescribe for from eight to ten cases a day, you would prescribe more scientifically than at present. But in these times, what physician with a large practice can do that, unless he lives where he has only a few people to take care of?

It is well to take case records, and to have some trained nurse, or someone who is reliable, to take them. I think, however, that as far as our homœopathic school is concerned there are a lot of things that should be weeded out. We have a lot of trash in materia medica. If everyone who is prescribing in a homœopathic school would hold on to facts, we might get something done. But to describe something that has been used on only one patient is wrong. It must be proved by being used on a number of patients, to see whether it is worth while. In that way, we shall get down to facts. The men doing research work ought to have more encouragement.

DR. HENRY L. GOWENS, Philadelphia: Dr. Bartlett made the statement that he was going to read his paper before the County Medical Society. I feel that it is a large subject, and should be taken up by the American Institute of Homœopathy. He spoke of the modern proving of drugs. I feel that so many drugs have been proved, as he states, it would be the work of at least one generation, and probably of several generations, to go over this work and confirm it. The task should be allotted to all the homœopathic physicians in the United States. If that were done, within a year's time, a certain group of men in the country could prove one drug; another group, another drug, and so on. In that way, they could cover a number of drugs, and the expense of the proving would be divided among all the physicians in the country. I hope that Dr. Bartlett's work will be brought to the attention of the American Institute of Homœopathy.

So far as records are concerned, I do not believe that any physician will lose any great amount of time or neglect any case, no matter how trivial, if he takes complete records; no matter whether he is a general practitioner or a specialist. The question of making case records for the general practitioner and for the specialist is a matter in which I feel they should go hand in hand. When a general practitioner sends a case to a specialist, he should send along with the patient the record of everything that he has done for the patient. If he sends a case to a hospital, he should send the report to the hospital. In that way, there will be co-operation, not only among physicians and the hospitals and between physicians and specialists, but even among specialists. In this way, everyone will know what has been done for the patient before, and the work will not be duplicated, at a loss of time to both patient and physician.

There is one thing that is certain in this modern time, and that is that with the Government unifying certain lines of work, it will teach us that we can accomplish more by unifying our studies in homœopathy. I feel that if this is taken up by the American Institute of Homœopathy, we can in five years have definitely proved and tried a large part of the voluminous list of symptoms, and have them boiled down to a few that can be easily memorized by a young man. In this way, the young practitioner will be able to learn more about the homœopathic drugs.

DR. GEORGE W. MACKENZIE, Philadelphia: I want to say that the ear, nose and throat men that I see in the room keep most careful records, which will compare favorably with those of any general practitioner. I keep careful records myself, also; and I think that history-taking is a very important part of the practice of medicine.

There seems to be an impression among the general practitioners that when a specialist sees a tonsil, he always wants to remove it. The general practitioner believes that if a tonsil is there, it was put there for a purpose. The same may be said of the appendix; but no one has yet proved that a patient who had a pussy appendix removed was worse off than before. Some very careful laboratory research work done in Chicago by Billings and others has shown that the same microorganisms may be more or less infectious, according to the medium in which they have been grown and the amount of oxygen they get. There are tonsils which have deep crypts, containing cheesy deposits that we can extract with an instrument and send to the laboratory. From repeated attacks of tonsilitis, the crypts in a child become, after a while, chronically infected. The tonsils are attached to the pillars of the fauces by the plica triangularis. After a time, this membrane comes over the tonsils, and shuts off air and oxygen. This causes the organisms in the crypts to increase in virulence until they correspond with the organisms of appendicitis in this respect; and some time, when there is a strain, the patient develops appendicitis. If there has been strain on the arm, and the patient is exposed to a current of air, he develops neuritis.

There are a lot of patients who are sick, with subjective symptoms, which the general practitioner records; and he prescribes for the symptoms. He may get a subsidence of the symptoms, and believe that the patient is cured. Later on, however, because of increased lowered resistance or some

particular strain, over-work, etc. he comes down again and is treated. Finally, the patient becomes a chronic invalid. You find people who have worked hard in early life developing some of the chronic diseases. Now I challenge those of you who have used homœopathic remedies, carefully prescribed, to take a tongue depressor and look at the tonsil; yet many who would not take the trouble to do that consider themselves good homœopaths. If Hahnemann were living, he would not so consider them. Then you condemn the throat specialist who removes the tonsils and proves that the patient has been improved in many respects.

DR. HORACE G. CARMALT, Pittsburgh: I rejoice in one of the statements that Dr. Bartlett has made, and that is that the hospital in Philadelphia in which I formerly had the privilege of being a resident is going to do some work in the way of investigating results that may be of good promise; and if it is not asking too much of Dr. Bartlett, I should like to have him outline a little bit of that work, so that other hospitals and the rest of us may help in this work. I took a good many histories at Hahnemann Hospital in the year that I was there. There were six of us there at that time, and we handled ten thousand cases among us. While I was junior, for a period of six months, I tried not to neglect any history. I have this to say: that taking of history at that time has stood me in good stead. At times, like other general practitioners, I get busy and do not take a history in all cases. If a man comes with a plain case of follicular tonsilitis, I may not take a history of it, if I am busy; but if that patient comes back, or if it is a case that seems of graver import, there is a history put in my case drawer. I try to use judgment as to what cases I should make histories of. I do not like to write long family histories for cases of acute tonsilitis, for instance; but when a man comes in, as happened a short time ago, with a boil on the side of the face, and I find from a urine examination that there is sugar present, I go into the history and find out considerable about the man.

My training in the hospital was of great value to me. Whether my histories were of much use to the visiting physicians, I do not know. I want such men as Dr. Bartlett and the other clinicians here to appeal to the men that are out in general practice, to give us some specific directions by which we may interpret the results of our experience and give to our brethren this experience in such form that it may be of value to them. I should like to co-operate in a plan by which my

experience can be utilized. I should like to see homœopathy tested, modernized and kept up-to-date; but I should like to have a plan by which we can all keep a record that is adequate, and yet will not be too much trouble for us to keep, and which certainly will be of value, because it will be similar to that of hundreds of other men. Then, at the end, we can give the results to some clinician, and the interpretation may come; and we shall have a definite value for our case records and our experience in the practice of medicine.

DR. MARY E. COFFIN, Pittsburgh: My experience in case-taking dates back before my study of medicine. I took training as a nurse before I studied medicine; and it was then considered proper for the nurse to record symptoms so that the physician might get the information; and I certainly have been thankful many times for this training in that line. I also had some training in the Philadelphia Hospital, where we were required to keep thorough case-records.

I do feel it would be a good thing for those of us in hospital work, if we could have the nurses trained to record the symptoms as they see them. They get a certain knowledge of *materia medica*; and if they had some school training, those who were interested in homœopathic *materia medica* and desired to give the points to the physician could make it easier for those trying to prescribe.

DR. G. MORRIS GOLDEN, Philadelphia: There are certain simple things that we should keep in mind, as far as therapeutics is concerned. Homœopathy is *a* form of therapeutics, and not *the* form of therapeutics. The ideal form of therapeutics, we have not attained; and the use of adjuvant treatment is a form of therapeutics. I have heard it stated that the old-fashioned prescription was all that is necessary; but you would not think of giving the homœopathic remedy without attention to dietetics, climatic conditions, etc. It would be useless. The sooner we come to realize the fact that homœopathy is *a* form of therapeutics, the sooner shall we get nearer to the idea and get better results.

With reference to the *materia medica*, the idea that Dr. Bartlett brought out regarding the amount of useless symptomatology should be emphasized. It is beyond the grasp of the human mind. Many conclusions have been drawn from one case. If a man can show us a tabulation of fifty, seventy-five or one hundred cases in which such a symptom was relieved by a certain remedy, this would be of value; otherwise, the symptoms are useless.

About fifteen years ago, under the direction of Dr. Bartlett, I instituted in the college a course of case-taking, which all students from that time until the present have been taught. It may seem to you a trivial matter; but, as Dr. Bartlett has brought out, it is important that the men shall know the progress and clinical course of the disease. It was from ignorance regarding the clinical course of the disease that our erroneous impressions were formed in relation to the apparent cure from homœopathic remedies. The busy practitioner says, "I have no time to take histories." It is the man in the general practice of medicine who is the man that can note the first manifestations of disease and the early effect of homœopathic medication. When does the specialist see disease most frequently? When it is well advanced, after the general man has taken it along several years and it has gone through the gamut of homœopathic remedies. It is up to the general practitioner to institute these methods of case-taking. One of the greatest heart specialists that the world has seen is Sir James Mackenzie, of London. He began practice in a little town in Wales. He was systematic and observant. The majority of people are unobservant and unsystematic. The third point is to draw correct conclusions from what we see and hear.

Regarding case histories, at the present time it is claimed that the progress of medicine is due to the untiring efforts of men along that line in making careful case records; and it is from this standpoint that the enormous amount of statistics have been gathered. I think that the same thing is true as regards our *materia medica*. Let us be more systematic in symptomatology; when you first visit the patient, and make a complete history, do not end the record. I have seen records made at the first visit, without anything being added at subsequent visits except the remedy given; no record of the progress of the case.

DR. E. A. KRUSEN, Norristown: The subject is such a broad one and presents so many phases that we can hardly cover it in one meeting or one afternoon. I think that one of the troubles with the general practitioner, perhaps with all of us, is that we hide our light under a bushel. We are so satisfied with the results we get that we very seldom publish our cases and the results that we obtain from giving the single indicated remedy. That we ought to do; if we would publish these cases, give them to the profession, so that they might see what has been done, instead of reading it out

of text-books, I think we could do a great deal of good in establishing the reliability of remedies in certain cases.

As for case-taking, I do not believe that we can get anyone to take the cases for us. I should not feel safe in getting a nurse or anyone else to take the symptoms in the cases. These persons might get the grosser symptoms. They could, perhaps, get the plain history of the case, but they could not get the finer indications for the drug. I have followed a system of case-taking ever since I began the practice of medicine. I have my book on my desk, and as my patient talks, I make a record of the symptoms just as briefly as possible. Very often, especially if it is a case that has come from old school hands, I find that it is very difficult to get the symptoms. The patients will give you the grosser symptoms, but it takes a good bit of time to get the finer and the uncommon, peculiar symptoms, which these individuals often think immaterial. Nevertheless, they are of the greatest value to the homœopathic prescriber. That case is gone over carefully; and I begin with the head and go down over every part of the body and every organ. I get the aggravations of the symptoms and note the mental symptoms. Then I have the case; and I think that by that time I can select my remedy. As I go along, there will be half a dozen or more remedies that will suggest themselves to my mind; but by the time I have finished the case, I have made my choice of a remedy. That record I have to refer to subsequently. I think that every prescriber will be able to make a record of his cases and keep it, and will thus have something of value to refer to. If it is a difficult case and his remedy does the work, it leaves an impression in his mind that he will never forget; and the longer he prescribes in that way, the stronger a prescriber he becomes. But if he takes his case histories carelessly or does not take them at all, but merely makes a diagnosis and then gives one of our compound tablets to which one speaker has referred (and I am sorry to state that a great many give a sort of slipshod prescribing and all they attempt to do is to make a diagnosis), then the longer he does that kind of prescribing, which is very easy, the poorer a prescriber he becomes. I should like to make a plea for careful case-taking, and giving of the single remedy, and the recording of the results.

DR. A. L. KISTLER, Allentown: I am not averse to tonsilectomy. I am rather an example myself. But I did have a boy of about five years whose parents, for probably two years, had been urging operation on the tonsils and ade-

noids because, at every little cold, there was breathing through the mouth—and even when he did not have a cold. During July he suffered a fracture of both bones of the forehead. At the end of a week there was no attempt at any plasticity at all. At the end of two weeks, there was still no effort at union. I said to the mother, "I will give him another chance, and give him medicine for a week. If, after that time, there is still no attempt at healing, then we will have to resort to some surgical process." When they returned, the following week, union was established, and he made a beautiful recovery. About the second week after that, the mother came along and said, "Will that medicine affect the tonsils and adenoids? He breathes so much more freely since he has taken it." This improvement was maintained, and they have no thought of operation for the tonsils and adenoids since that time. It was remarkable to me. I had not tried it before. The remedy was *calcareo fluorica*. I had not thought of using it before for tonsils and adenoids, because we so readily turn these cases over to our specialist friends.

DR. E. P. CUTHBERT, Evans City: Regarding the tonsils, I would say that there is a minister in the East End who was a patient of mine when I practiced in Homestead and the people there would come up to see me. About two years ago this minister sent his children to an allopathic physician, who said that the tonsils should be removed. He did not like the idea. He sent them up to me, and wanted me to say that the tonsils did not need to be removed; and, of course, I said they did. About a year ago I was passing through there, and stopped to see how the children's tonsils were getting along. I said, "You did not have them removed?" "No," he replied, "I got a book from the homœopathic pharmacy, and got some of the medicine recommended in that book; and I have been giving that medicine to them, and they are improving. I will let you know how they are." The medicine was *calcareo iodide*.

DR. J. G. HEMINGTON, Uniontown: I think the story that Dr. Marsh told us yesterday would be applicable to both the specialist and the general practitioner. He told of a soldier who went to France because his wife nagged him. Then she wrote him nagging letters. He finally wrote back, "If you do not quit nagging me and let me enjoy this war in peace, I will stop writing to you." Many specialists have left the homœopathic school because they have been nagged by

the general practitioners. To-day they are getting back at us and nagging the general practitioners.

It is my experience that I am able to absolutely cure some cases of tonsils and adenoids with calcarea and other drugs of that character. Why cannot specialists show us the way to prescribe homœopathically instead of taking out every tonsil that appears? We should be the best of friends, and unite on every proposition. I send many cases to Pittsburgh for operation, and some of the specialists here also recommended a remedy. I am glad to have them do so, and I am pleased to see that the surgeons in Pittsburgh are prescribing homœopathic remedies.

DR. GEORGE W. MACKENZIE, Philadelphia (speaking for the second time): The last speaker said that he would be glad to have the specialist show the general man how to cure adenoids and tonsils by homœopathic remedies. I am reminded of a joke that I heard. A traveler was in Rome, and someone there showed him the skull of St. Peter. Subsequently he went to Ireland, and an Irish faker showed him the skull of St. Peter. He said, "Why, I saw that in Rome. This cannot be St. Peter's skull." "Yes, it is," the faker said, "this skull was his when he was a boy." The same thing applies to the tonsils. When a doctor removes adenoids and tonsils and says he cures the case, I hardly know what he means. The only way to prove that the case is cured is to have the tonsil, when diseased, sectioned and studied, and also do the same thing after it is supposed to be cured. The point I want to make is this: that a great many people claim cures of certain conditions. To claim that one had cured adenoids and tonsils, it would be necessary to have the exact measurement of the tonsils and adenoids in the pathological condition, before he gave the remedy; and also subsequently, when the case was called a cure. That is perfectly fair, is it not? How many do it? The specialist looks at it, and ascertains the size of it with his instruments of precision. It is quite possible that a patient may have an adenoid, and that patient be sent by the general practitioner to Dr. A, who looks at it and says, "The child has bad adenoids, which are doing him damage, so that he does not get proper oxygenation. He is prone to low-down throat conditions and lung conditions. If they were removed, it would be better for him."

In New York City they undertook to go through the schools for deficient children and those retarded in their studies, and they found many thousands with such conditions

who, immediately after their correction advanced in their studies to a point considerably farther than they were before. Well, concerning this child's adenoids, Dr. A. says that they should be removed. The child is next seen by Dr. B, who says, "No operation is necessary."

Both have been right, yet neither of them took every factor into consideration. The first physician saw the case when there was inflammation and swelling; the second, when there was no inflammation and it was shrinking to its ordinary size.

When we examine adenoids, we may find one not much larger than a small bean. That may, during a bad cold, swell up, and, through its proximity to the eustachian tube, tend to carry the inflammation to the ear. If the doctor who saw it first had removed it thoroughly, the child would have been prevented from having an attack of middle-ear suppuration and mastoiditis. It has been the mistakes that the general practitioner makes that have enabled us to live. As long as you make them, we specialists will survive.

DR. JOHN G. WURTZ, Pittsburgh (speaking for the second time): Prescribing depends on symptomatology. Diagnosis depends a good deal on symptomatology. I am a laboratory man, and laboratory methods are aids in diagnosis; but the best aid is a good history. I am glad to know that the West Philadelphia Hospital is taking histories of nose and throat cases, because I wanted to bring out that there was too much slipshod method in nose and throat diseases. Some diseases of the nose and throat are local and some are systemic diseases, with local manifestation. For instance, syphilis, tuberculosis, diphtheria, rheumatism, scarlet fever, measles, typhoid fever, bronchitis, and even cardiac diseases have nose and throat manifestations. There are some nose and throat men who will take a person with a hypertrophied rhinitis and start in to paint the mucous membrane of the nose and throat when it is because the heart action is weak that the nose and throat are congested. It is these people who take poor histories. If they could treat the systemic condition a lot of the local manifestations could be cured.

DR. ANNA C. CLARK, Scranton, Pa.: I have a great deal of respect for specialists, and frequently call them in consultation. I like to see them live, and I like to keep all the work away from them that I can, but I do believe that we, as general practitioners, should look more carefully into the basic condition of our patients. We are apt to take ex-

tremely superficial histories. It is just as has been said, that if we will go back into the constitutional history of the case, the previous illnesses, we may find that some of our present symptoms date back to left-over diseases which we thought were cured. I have learned some very valuable things in history-taking from Dr. Mackenzie and from our other specialists. I remember being asked to go with a surgeon to see an appendectomy. He said, "It will be an ordinary affair and will not take long." We found the patient in the operating room and the surgeon dressed before he came in. He looked at the patient and said, "The breathing is pretty rapid. How is the pain?" The abdomen was relaxed. He went over the chest with a stethoscope and diagnosed a double pneumonia. He did not operate for appendicitis. That was good work on the part of the surgeon. I think our specialists should help us with *materia medica*, but it is our business to bring to the specialists every detail of the case. One of my colleagues calls in a specialist and then stops on the outside to see what he will do. I always give him every possible aid and carry out the after-treatment for him in such a way as to bring about the cure of the case. About the care of our remedies and getting accurate data, I have this to say: If we would just make a card history, and index of our remedies, to refer to when we prescribe a certain remedy, giving on the card, the name of the patient, the date and the symptoms that called for the remedy, we would soon have accurate data on every remedy.

DR. CLARENCE BARTLETT, Philadelphia, (closing the discussion on his paper): The subject of my paper was not record-taking; but, inasmuch as record-taking is probably the foundation of medicine, it is not a bad thing to begin the study of it as a basis for the modernization of homœopathy. All the records I examined were good; but there is no such thing as a perfect record. I can find fault with anyone's, without being captious. If, however, we had good records, modernization would be accomplished 95 to 98 per cent. Now the Committee on Medical Education has certain pre-medical requirements. I once studied shorthand in college; and when I studied it, I went into the study in the same way as you take up foreign language, in a foreign land. Resolved not to speak our native tongue. I learned the signs and stopped all use of long hand. I afterwards kept it up. I have thousands of records. I can take a patient's remarks down with a fair degree of rapidity, probably a hundred words a minute; and

my case-taking costs me not one second of extra time. We should read into the present requirements for the study of medicine, shorthand work. It would be far more valuable than German! That is my personal opinion, of course.

I do not want to be dogmatic, but some *materia medica* taught students is absurd. It is on record that a professor of *materia medica* taught as a symptom the sensation as if a flock of blackbirds was let loose in the rectum. Is it any wonder that the students lose respect for the professor? Another man traveled one hundred miles to tell of a case of cure in a woman because she looked under the bed every night for a burglar. Another man said that the cats in his neighborhood kept him awake at night, but he fixed them; he put some hyoscyamus in the bowl of milk and left it in the yard, and they never howled again. Teaching like that has a bad effect. Dr. Landis misunderstood me. I knew the paper would cause discussion, so I was careful of my phraseology and had it criticised severely by two friends before I read it. I said that we occupy the same position as the old school. We have been outcasts, but now we are acknowledged. We are found. We are in the service of the United States for the first time in history, and without any comeback. We are sought after, and represented on the National Council. That is what I meant.

I am coming back to hospital work again. One day, a number of years ago, I picked up a record in the hospital. It contained the name, age, residence, etc., and then it said: "Fell and broke clavicle." Diagnosis, "Acute Bronchitis." That is what started me on the war path. But that was ten or fifteen years ago.

I feel that our County Society has taken a step backward, has gone back to the dark ages because at the end of each meeting we have reports of cases and generally they are just anecdotes: "I cured a case." I report a case as cured if I do because it is an unusual thing. The single case is for the exception. To prove a rule, you must have a long series of cases.

Dr. Klopp said a little about prescribing. Each winter from twelve to sixteen young men from Hahnemann go to Allentown and spend a week with Dr. Klopp. They come home with lots of good things to tell us. They tell us a great deal about the way that Dr. Klopp teaches *materia medica* as applied to the class of cases that he has. There is generally a good mimic among these men that is very enter-

taining, for this vaudeville artist can imitate Dr. Klopp and every patient in the institution.

We seem to have degenerated into a discussion of the pros and cons of tonsils. That is hardly appropriate, but I do feel that very often in the study of tonsillar diseases, we forget the relationship of tuberculosis and syphilis.

Dr. Carmalt wanted to know how we do it. We could do it a great deal better if we did not have some opposition. The great trouble is keeping the medical man at his work and not wandering off to do anesthesia for the surgeon. If the surgeon will take the medical interne from his wards to assist at operations, the medical work will never amount to anything.

The next thing is to teach the general practitioners how to do this work. The first thing is to get the history, the examination and the record, and not be afraid to write down something wrong; because, if you find out to-morrow that it is wrong, you have learned something. Let the mistake stand, but correct it. That is the difficulty, the fear that someone will find something written down that is wrong and make you look ridiculous. I have no doubt that these two records which I have in my hand contain something that would appear ridiculous.

The next thing is to get a hospital registrar who will catalog the records, and so on. The next is for the head of the department to go over the records and sign them. Dr. Golden last year presented a paper on pneumonia and this year he has listed another paper on pneumonia. I believe that we have some four hundred pneumonia records in our hospital. They can be gone over and over again for different things. There is probably no one record complete; but in the four hundred there are always a sufficient number that are complete in some one particular, to enable us to get a series that will give us definite information based on our own personal experience. Questionnaires in record-taking are, to my mind, one of the biggest farces in existence. They rob the men of the personal factor, and the personal factor in the individual is the factor after all that counts. One man may speak of the importance of removing the tonsils for the cure of constitutional diseases in such a manner that you might think he was rabid on the subject; yet I, who know his practice well, know that he selects his cases, notwithstanding his talk. You have to know the man always, that is personally.

As for records made by nurses, I regard them as danger-

ous, provided that they are accepted as infallible. A nurse's record is convenient in assisting the doctor to get somewhere in a shorter length of time, but he must confirm it. Imagine my horror one day on looking up a record to find it stated, "Dr. Bartlett called, made a paracentesis of the chest and failed." I went up in the air, I had not failed. It was a case of pneumothorax with intense dyspnea, with air in the pleura under tension. I inserted the needle for air to relieve the increased intra-pleural tension, but these nurses wrote opinions instead of Observations.

Dr. Golden used to teach case-taking. I know what he thinks of it. One year ago, our teacher of case-taking gave up his job and we had to select a new one. Dr. Golden had been advanced to the high position of "Associate Professor of Clinical Medicine," and he was itching to get back to his old job, and the only reason he did not was because he had not the time.

Dr. Wm. Bigler, with whom I was associated in my younger days, used to say that homœopathy should be treated as a specialty in therapeutics and not as a separate system of medicine. The idea is a good one.

There are a lot of medical liars. A man said to me that he had two hundred cases of a certain disease in which he had confirmed a certain symptom without a single failure. This was a symptom that Dr. Sappington and Dr. Wurtz had no confidence in, but this man said he could prove it was a reliable sign. I doubted this as I knew Dr. Wurtz's and Dr. Sappington's ability to observe.

The specialist observes terminal pathology, death-house pathology. The general practitioner observes a living pathology. Therefore, the records of the general practitioner and the specialist are not the same. Their situations are entirely different.

I cannot help but get away from the discussions of my paper to refer to mental disturbances in tonsillar disease. Many deficient children have bad tonsils. Many children with bad tonsils and adenoids have a mental deficiency. There are two classes unquestionably: one in which adenoids are sufficiently bad to require treatment; and they should have it irrespective of the mental condition. Their removal sometimes improves the patient and sometimes cures them entirely.

Within the next two or three months there will come a situation of affairs that will make many who have not good records feel badly. We are called upon for certificates for

draft purposes, and many of us cannot state the facts in a way to present them properly to the draft board. Here is a patient threatened with transfer abroad, and I have a good record showing duodenal ulcer developing before the war. That will save the Government the expense of sending him abroad. I have records of cases of epilepsy and the character of the ink on the papers shows that they are old records. I can transcribe them and swear to them. That is different from giving mere impressions.

I thank you most heartily for the cordial reception you have given my paper. I hope you will make a more practical aspect of the situation by doing something in case-taking and the collection of a series of cases. You have confidence in gelsemium and also aconite as remedies for coryza: but there is none of us who can show that our therapeutic cases are any shorter in duration than the untreated ones. Yet it is a simple problem which anyone can handle and no one does. We cannot refer this to the Institute. The Institute has handled it before without any result. The trouble is that the professor of one college is afraid that the professor of another college may score a point. There is grandstand play for effect on the galleries and nothing is done. *Materia medica* goes on with its ridiculous symptomatology just the same.

ACUTE INDIGESTION.

BY

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TODAY we are confronted by the interesting fact that the best recent articles on diet have been written by the laity, and I think I may truthfully say that the majority of physicians throughout the country have overlooked the importance of urging a proper dietary upon their patients.

An intelligent engineer studies the character of fuel used to run his boiler. By experience he knows that the quantity of steam created depends upon the quality and quantity of fuel and the manner in which it is used, which in turn reacts upon the staying qualities or longevity of the engine itself. Everyday we run across evidence among our patients that they are injudicious in the stoking of their human engines, and that through this they are creating a condition of affairs that not only aggravates certain states of their being, but also induces

diseased conditions that could easily have been avoided in the choice of a diet.

The prevailing high cost of living has forced the majority of civilians to economize in a manner that has been of marked advantage to their general health, but there is still an alarming number of "physically disabled" who have not learned to stoke their engines properly, and who come to us sooner or later for advice. Herein lies the difficulty. We cannot dogmatically lay down rules for the dietary of a sick person and have them always prove acceptable or helpful. We find it necessary to acquaint ourselves with individual tastes, habits and especially tolerances for different foods.

Some of our patients take it as an affront to their intelligence when told what they should eat and what they should avoid. They do not realize that every organ has its breaking point, and that the stomach, above all others, should be treated with the utmost deference and respect as it is influenced strongly by fatigue both physical and mental, as well as by the quantity and quality of food put in it. Our greatest problem is with those having personal idiosyncrasies, causing an inability to take certain foods no matter in what form they are served. With one it may be fruits, fresh or canned, with another fish or meat, in fact, anything edible. Sometimes it is the preservative used in canning which causes the discomfort which varies all the way from a sense of slight pain to the serious condition of ptomaine poisoning.

Predisposition explains much in our medical practice. We recognize that this term refers to a condition of body in which causes that leave other persons unaffected call forth an attack of disease in individuals predisposed. Predisposition explains the ease with which many of us form habits of thought or conduct, also why we may lack certain qualities of mind and character that enter into success or failure of our best efforts. It is doubtful if anyone who is not predisposed to nervous difficulty, ever acquires the habit of drinking alcoholic liquors to excess. A healthy individual may take liquor but it does not become an uncontrollable habit. The predisposition of another may lead him into gluttony, eating to excess for years, with no thought of the balance of food values for the purpose of maintaining health, perhaps because he knows nothing about such values, so eats as long as the food tastes good and he can secure what his perverted appetite demands.

The following list illustrates the kind of diet to which a man may accustom himself. I quote by permission from the written statement of an acquaintance of mine:

"For a period of twenty years I lived but to eat. In quantity of edibles, each day was a repetition of the ones gone by. Menus were greatly varied, but I was always partial to this one:

BREAKFAST—Sixteen to eighteen fried clams, two bunches of small onions, bread and butter, coffee and Dutch cake.

DINNER—Three and one-half to four pounds of roasted spare ribs, baked potatoes, baked onions, stewed tomatoes, lima beans, stewed corn, bread, butter, pie, rice or other pudding, and coffee.

SUPPER—One to one and a half pounds of fried sausage, fried potatoes, pickle or spiced cabbage, bread, butter, coffee and cake.

From 8 to 10 P. M. I would enjoy four or five bottles of beer, nibble a half pound of cheese and a few pretzels or soda biscuits. During the day and evening I had plenty of time to smoke eight to ten cigars and chew quite an amount of tobacco."

About two years ago, after a number of attacks characterized by intense pain, palpitation, and loss of strength to the extent of becoming unconscious, he changed his diet on the advice of his physician, with the result that for the past year and a half he has been doing hard and trying work and has not throughout this time been obliged to seek medical aid.

Another case in which predisposition, weak digestion, and an ill-chosen dietary combined, developed many alarming symptoms. A lady about 38 years of age, in good general health, although possessing slight powers of physical endurance, was subject to attacks characterized by much pain, dyspnoea, face flushed, pupils dilated, pulse weak, irregular and rapid, and at times so much disturbed that the heart almost stopped beating. This physical condition created an intense apprehensiveness. Separate examinations by several physicians during an attack, settled upon the diagnosis of myocarditis, with the usual treatment of keeping the patient in bed in a horizontal position, making no exertion to help herself, but everything so far as possible to be done for her by a nurse. This was followed out explicitly, and she was under this treatment for fully three months and under restricted diet.

After studying the case from all points, I came to the conclusion that the difficulty was not wholly cardiac, but one arising primarily from digestive disturbance, the gas formed after eating created the symptoms by pushing the diaphragm against the heart. To avoid this hyper-acidity of the stomach, the following diet was laid out and scrupulously followed during the past year with most excellent results:

A choice of any four articles at a meal from this list—

SOUPS—Vegetable soups and purees with bread or cracker.

FISH—Fresh fish, boiled or broiled.

MEATS—Lamb, tender, lean mutton, chicken, tripe.

FARINACEOUS—Hominy, tapioca, sago, macaroni, spaghetti, rice, barley, graham or rye bread, dry toast, crackers.

VEGETABLES—All fresh vegetables except cabbage. Vegetables to be especially well boiled. All salads to be prepared without vinegar. Lettuce, water-cress and dandelions.

EGGS—Bread pudding, tapioca, rice, prunes, cantaloupe, navel oranges (oranges with seeds not to be eaten.) Cornstarch, cheese. Desserts to be taken sparingly and not every day. Soft gelatine.

DRINKS—Cocoa, once a day only and not every day. Tea and coffee in moderation without sugar or cream. Six ounces of hot water to be taken an hour before eating. No beef tea or beef soups taken, avoiding rich pastry in pies or cakes.

Before giving this dietary, recollect that the patient was in bed, absolutely helpless, taking strophanthus, having to be lifted in and out of bed, heart's action very irritable, quickly aggravated by any disturbance either mental or physical.

Three months of this and the above diet was begun and regularly employed. Improvement in the patient's general condition began and has continued and for the last eight months she has been on her feet and traveling about the city daily in her professional capacity of parish visitor with no return of the alarming symptoms that formerly presented themselves.

Acute indigestion is frequently given as the cause of death. Newspapers state that "Mr. D—— was in his usual health but after a hearty dinner he complained of distress, had

difficulty in breathing. Medical aid was summoned but before the doctor could reach him he passed away." The question arises, will not an intelligent study of diet in these cases save and prolong a valuable life by teaching these people what to eat?

DISCUSSION ON DR. KINNEY'S PAPER.

DR. CHARLES A. LEY, Pittsburgh: In neurological work, diet, I believe, plays one of the most important roles in curing the patient. That holds true of other fields of medicine, also. The worst feature about the cases that come to you and that you put on a diet is that they do not observe the diet. If they did, they would get along better. I have a scheme that I worked out, which is very interesting to me, and I think would be to you. If a person comes with a chronic condition, I ask him to bring a list of what he eats for two weeks, or one week. I have him put down everything that goes into his mouth. This teaches you what that person eats. Then, if I want to determine to a certainty just whether he is getting what he ought to have, I have my stenographer rewrite the list, and I figure it out according to calories and types of foods; so that I know exactly what the person is getting. The person doing the least amount of physical labor is usually the one who is eating the most food. You also find that the persons doing the least physical labor are consuming the most nitrogenous foods. The man who works hard eats just about a normal diet, while the others usually over-eat. To prove this, I have figured my own diet, and have found it to be correct, if I am doing a normal amount of work. If I am loafing, I find I am eating more than when I am working, and am eating the wrong kind of things. It seems as if people crave doing something; and the thing they crave most to do is to eat.

DR. MOYER: I am inclined to think that every case of acute indigestion is a case of gall-stones in the future. I believe that when people have too much to eat, their gall-ducts pile up and they start acute indigestion. After they have three or four attacks of this kind, they have an attack of gall-stones. That has been my experience, and I should like to know whether others have had the same. However, where I am practicing, the people drink limestone water; and these cases may be due to the water.

(Dr. Kinney did not wish to say anything in closing.)

THE CHILD—THE FAMILY (HEALTH) DOCTOR—THE STATE.

(THAT IS, THE LICENSED PRIVATE PHYSICIAN AS AN OFFICIAL INTERMEDIARY BETWEEN THE INDIVIDUAL AND THE STATE).

BY

EDWIN LIGHTNER NESBIT, M.D., GREENSBURG, PA.

IN the white heat of the hour when civilization's house is in flames our first instinct and duty is to lend a hand to putting out the flames. At such a time there can be little patience with anyone who, standing aside out of the blistering heat of the advancing flames, would insist upon idly contemplating the grotesque figures which must inevitably follow in the trail of its smouldering embers. Likewise, in the heat of the battle itself there can be little patience with safe civilians who, far in the background of the immediate conflict, would insist upon arguing the ultimate consequences of any battle with those busily engaged in the actual fighting. The first and uppermost purpose of every rational man and woman in this country and others is to win this war against resurgent barbarism—at any cost.

Nevertheless, to actually win the war there is far more to be done than to crush the Prussian hordes into complete and unconditional surrender. In the very midst of destruction reconstruction must be planned and carried forward up to the very battle lines. In spite of the glare and turmoil and terror of war itself, it is imperative that those of us behind the lines be alert and prepared to make its destructive effects less and less persistent upon the generations succeeding those now engaged. At the same time we must constantly have it in mind that, in the final analysis, just as the smouldering embers after the flames have been quenched are of more long-lasting and really vital significance than even the flames themselves, so, too, the ultimate effects of any war upon the civilian population of all countries involved must engage our serious attention even before peace has been won. The sole objective of this mighty conflict, which alone can justify its stupendous human sacrifice and wastage, it to secure the welfare and happiness and safety of many generations of men and

women yet unborn for many years to come. We must take a broad social-economic view of the future, no less than a practical military view of the present situation.

Someone has well said that "the greatest asset of any nation is the health and efficiency of its people." If this be true at all, it must be equally true in time of war no less than in time of peace. But, what is this "nation," after all, in a social-economic sense? An aggregate of some 110,000,000 of human beings conveniently subdivided into smaller political groupings for governmental purposes. In this sense, then, "the State" may be considered as designating any collective political grouping from the nation down to the family. The family becomes the fundamental unit of every larger social superstructure. In a Republic it is for the welfare and protection of these fundamental family-units that the State exists, rather than vice versa. At the same time, in every true Republic the interests of the family are so inseparably bound up with the welfare of the State-as-a-whole that the defeat of the latter must certainly mean the destruction of the former.

Now these groupings—from family to nation through enlarging circles known as communities, towns, cities, counties, States and federal districts—are only political groupings, after all. But, within the family there is a unit of far more vital significance. This is the individual—that is, the child—the nucleus of every smallest constituent grouping; the center of gravity upon which hangs the future equilibrium of countless future groupings. Therefore, in a Republic, the identity and intrinsic worth of the individual, merged but not lost in the common interest, must be supported and maintained by every intelligent unit or group agency which we may devise for the end in view.

In the preceding introductory paragraphs the writer has endeavored to roughly sketch out the social and political considerations which must determine our approach to problems of reconstruction which must begin now. By tradition, by training, by opportunity, and by patriotic duty the medical profession-as-a-whole today finds itself confronted by a tremendous responsibility—not only for the immediate present, but for the very remote future welfare of our country. Never before has an opportunity been presented to any one vocation of men and women to contribute so largely as we have today, provided we are alert to conceive of our duty largely and do

it disinterestedly. *The medical profession, as such, becomes indeed the Public Health Service of nation, State or community grouping.* The Public Health Service, in this broadest and most comprehensive sense, is of more vital and permanent significance than even the military service: because, upon the effectiveness of its functioning must depend the final success of every other patriotic endeavor, whether military or civilian.

The term "physician" has never implied so much of distinction and opportunity for real service as it does today. But, the physician of today and of tomorrow must be a forward-looking man or woman, both in thought and in practice. *He must become a d-o-c-t-o-r in fact*; that is, a teacher of health, rather than a mere patch-work artisan to be called upon only after the fact, to make the best of a bad situation. As a health-teacher-to-the-family he should become a direct and responsible intermediary between the individual and the family not alone for preventive suggestion but for constructive advice. As a confidential advisor to the family-units by whom he has been voluntarily chosen from among others equally authorized, he should be recognized by the public generally as an integral part and factor in the Public Health Service with a legal authority fully commensurate with his dual moral responsibility to the individual on the one hand and to the State upon the other. The licensed private physician should no longer be looked upon by the public as being either a vestigial agency of the Public Health Service or an agency separate and distinct from it. In point of fact the so-called Boards of Health were originally designed to supplement, not replace, the institution of private practice.

In times of peace, with our national proneness to duplicity of organization and multiplicity of personnel, we have witnessed a steadily increasing disposition to extend the functions of the Public Health Service *independent of rather than through* the private practitioner. Over-impressed by the apparent efficiency of mass action when directed by a central governing mind, we have attempted to create a separate and duplicate Public Health Service in addition to the institution of private practice and at constant cross-purposes with its professional and economic interests. We have attempted to impose from above a type of organization essentially autocratic upon a profession instinctively and by training democratic and

individualistic. Hence, the constant buckling of the Public Health Service at its point of immediate contact between the State and the individual.

In the face of the fact that the average licensed physician is today better qualified than ever before to be a direct and responsible representative of the State, we see one after another of his professional prerogatives delegated to some supernumerary local or State or Federal agent—with loss of time and directness of effort and duplicate costliness to the public in men and money. In spite of the fact that the licensed private practitioner is by necessity on the firing line of immediate contact with diseases in their concrete and personal forms, strangely enough this trained man or woman may not officially quarantine or remove the quarantine from a suspicious case of contagious disease by the simple device of pasting a small notice at the entrances and exits of the building; but, must wait till it fully develops, and then delegate this official ceremonial to some specially chosen but not trained dignitary at a cost of invaluable time and money otherwise better employed.

With the increasing diversion of medical service from civilian into military channels, many communities and many more families throughout the nation are threatened with a serious curtailment of needed professional service—from the standpoint of future welfare. *In the exigencies of war we have no disposition to withhold needed service in support of the military enterprise of the nation.* But, this is not the time either to maintain useless duplication of men and money for the service needed by the civilian population. Is not this the time rather for a closer and more effective integration of the interests and the functions of all public and the private health agencies?

By the simple device of an executive proclamation from the capitol of each State in the nation the Public Health Service of the States and the nation might be immediately recruited with thousands of trained public health deputies at the very bed-sides of diseases. Deputized at once by the authority of the license issued by its own authority, each State Health Department would have hundreds of trained functionaries on the firing line against outbreaks of diseases in epidemic waves; and, an equal number of representatives to put teeth into the departments' prophylactic advice, rather than to merely pass

out sanitary leaflets and tracts, which the man or woman who needs it most either will not or can not read. *Is there any good reason why a licensed physician, if competent to diagnose and to treat a case of diphtheria or measles in the interest of the individual, should not be held equally responsible by the public to manage its prophylaxis in the interest of the State?* Is there any good reason why a reputable and patriotic physician should not be regarded as seriously by the public, in respect to the execution of public health laws and regulations, as the average local board's deputy? *By the authority of the State, evidenced by his or her license alone, the licensed and reputable private physician should be made an authorized representative of the Public Health Service with a dual official responsibility to the State and to the individual fully commensurate with his or her present dual moral and professional responsibility.* Does the dignity and training and professional intelligence of the medical profession warrant anything less? Let us think this over.

DISCUSSION ON DR. NESBITT'S PAPER.

MR. JOHN IHLDER, Philadelphia: I should like to ask Dr. Nesbit one question. That is: Is it possible to serve two masters? He spoke of this dual function of the physician. Many physicians feel that they owe undivided allegiance to their private patients, and that private allegiance may sometimes interfere with allegiance to the Public Health Department. Could or would such physicians (I am speaking now as one without first-hand knowledge) accept the position of owing their first allegiance to the State, and owing only secondary allegiance to the private patients?

DR. NESBIT, closing: Concerning Mr. Ihlder's question about dual allegiance, I would say, let us face the facts. At the present time, the licensed physician has a dual allegiance. He has a dual moral responsibility: but, at the present time, it is not incumbent upon the licensed private physician to act in the interests of the State. What is the result? The result is not only a defective application of our public health laws, but a serious disadvantage to the man who does construe his responsibility literally—in this way: Is there any practical way of preventing the physician called to a case of sore throat from diagnosing that case tonsilitis, in the interest of his patient, and treating it as diphtheria, in the interest of the State? Or, put it this way: In diagnosing this case

as diphtheria, in the interest of his patient, and regarding it as tonsilitis in the interest of the State? Who will gain-say the physician the prerogative of saying, "This is a case of tonsilitis?" Let us take the question of scarlet fever. What way is there, at the present time, of preventing the man called to a case of scarlet fever from diagnosing that case as stomach rash from the standpoint of the State, but treating it as scarlatina, in the interest of the individual? On the other hand, in view of the fact that some men are more scrupulous than others, there is a premium placed upon unscrupulousness. There is a tendency for the individual who cannot afford to be quarantined to call into service that physician whose ability to treat scarlatina is unquestioned, but whose eyesight is a little defective when it comes to reporting it as such. Now, my contention is that the only way that you could overcome that is by placing on every man holding a license an equal obligation. Therefore, the individual who would always select Dr. Jones, instead of Dr. James, finds himself confronted by an official representative of the State in Dr. Jones, just as he would in Dr. James. On the other hand, when the public recognize that the physician has that responsibility, they will hold Dr. Jones to a strict accountability, if he fails, in the interest of the State, to report the case as scarlatina and manage it as such, in the interest of the community.

The curious situation now is that we have the moral responsibility, but we do not have the legal authority of a deputy. I may see a case to-day; and, according to routine, write out a little card to-night and put it in the mail. If the mail is working on time, well and good; but if it is a holiday or something, the card will reach its destination in the Public Health Department much behind time. When it arrives, the health officer may be manufacturing chocolate, or be otherwise too busy to attend to the matter. He calls his deputy; and if the deputy is not busy at the other side of the county placing in position a placard which has no power to keep within those who wish to come out or to exclude individuals who desire entrance, he attends to the matter by pasting a placard on the door. What is a placard? It is a kind of scare tactic. What the public want to-day is a warning, and a timely warning, of the presence of a contagious disease. They do not want to be scared. They will not take a jimmy and break into a house containing diphtheria or other infectious diseases. But we have no time to go into that.

ACUTE EAR CASES IN GENERAL PRACTICE.

BY

HENRY W. CHAMPLIN, M.D., TOWANDA, PA.

ONE of my numerous deficiencies in the early years of my general practice was the inability to cope with acute inflammations of the middle ear. My patients suffered physically and I suffered financially. The desire to do better by my patients and myself has prompted me all the years of my practice to qualify myself for rendering more efficient aid in these cases of great distress and danger; and I am not through learning yet. I feel sure that I shall be the wiser for any discussion this unpretentious paper excites. I am also prompted to produce this brief paper by the fact that many general practitioners seem to be about where I was in my early days with reference to acute ear cases.

I was at a disadvantage in that I endeavored to manage cases without anodynes, whereas the prevalent practice was to use opiates and permit the disease to take its course—which all too often was a very unfavorable one. We had days and nights (especially nights) of horrible suffering, chronic running ears, mastoid complications, incurable deafness, and constant jeopardy to life. To permit such a course of the disease now would be culpable if not criminal. Handicapped as I was in my earlier experience, I often seemed to get very favorable results from careful prescribing; while freedom from deleterious effects of drugging often compensated for my deficiencies. However, there was much that was lacking, and no one available who could do better than I. What better can we do now?

As I am preparing this paper a child is brought in with suppurative inflammation of the middle ear of some days' standing. There are swelling, redness and tenderness over the mastoid; the auricle stands out from the head; there is discharge of pus from the meatus; and the temperature is significant. The mother has added to the danger by putting sweet oil in the ear and plugging the meatus with cotton. I cleansed the meatus and packed with gauze drainage. I ordered ice to the mastoid, and instructed the mother how to use gauze drainage rolls. No other local treatment to be used. The child did

not come back on day requested which gave me some apprehension; but a few days later the mother brought her and the report that there was almost immediate abatement of symptoms, and no discharge from the meatus for several days. In this case, as often with young children, there was early rupture of the tympanic membrane, thus escaping the days and nights of extreme suffering.

Recently a young lady came with acute suppurative inflammation of the middle ear having had no sleep for four days and nights on account of horrible pain. She showed a distended and unruptured drum membrane—the thickest and toughest I ever cut. She was relieved from the moment of the incision, and the discharge was most profuse. Her physician could have sent her earlier, but I am not sure that he sent her at all; he seemed to be willing to struggle with the *bête noir* of my early practice.

Another case is especially illustrative of what a physician in general practice does not need to do at the present time. A young girl was brought with a mastoid abscess fully developed. She was emaciated and toxæmic, and had been running a temperature for weeks. Her physician gave her up only when her mother demanded other help. He telephoned me that he was sending me an ear case. I operated and drained the abscess, and drained the meatus with wick and gauze drains. The recovery was slow, but the ear healed completely. I do not know any physician now so remote from skilled help that he is justified in thus jeopardizing his patient.

The cases are not all easy. A man came to me two years ago with complaint of severe pains (I speak of them in the plural because of the intermittent feature) about the ear—front and above as well as back. There was pain on traction of the auricle. He was under other treatment for "neuralgia." I found the meatus impacted with cerumen which had been somewhat softened by the free use of olive oil. I removed this with warm, soapy water, and found the meatus and membrana tympani of a deep, even redness, as usual in such conditions, but obscuring any discoloration which could be attributed to a middle ear inflammation to which other indications did not point. My patient seemed much relieved by the cleansing of the meatus, and I predicted continued improvement; so he continued treatment with the other practitioner. Some days later he returned complaining of unabated pains. I dis-

covered a granulation which had assumed a polypoid growth had developed on the tympanic membrane. I curetted this away and applied a particle of silver nitrate fused on a probe to the base of the growth. I prescribed aspirin which gave entire but temporary relief to the pains. I mention this chiefly to show how little reason I had to recognize yet the suppurative inflammation which was developing. A few days later he reported to me with the membrana tympani bulging at its upper part. I made a sweeping incision from below upward to the point of bulging which was followed by a free discharge of pus; this was promoted by suction and gentle pollitzerizing. I applied gauze packing which I changed twice a day. I cleansed the middle ear with argyrol solution and picric acid 2 per cent. in equal parts of alcohol and water; these solutions passed through the eustachian tube into the throat. There was daily improvement in the case, though the pains abated but slowly—the anodyne being necessary for a week after the incision. The pain from pressure was not that usually experienced in such cases. My incision closed at the lower portion, but the discharge continued at upper end for about three weeks. The cure has been complete since that time. I report it as an anomalous case.

I do not claim that my management of these cases is that of a highly expert specialist, but it is some improvement over my early incompetence; and I believe that every general practitioner should do as well or else turn every case of ear-ache over to one who can. During the late years of my general practice I carried in my case an electrically lighted otoscope, and looked into the ears of every sick child who could possibly be suffering from ear complications. I was thus able to recognize such troubles early and often thwart them by suitable treatment. I permit the use of hot water in the ears as a helpful home remedy. I prescribe carbolic acid, one dram; glycerine, seven drams; as a safe and efficient remedy. Aconite or belladonna may be indicated, but the most useful remedy in my recent years has been ferrum phos. 3x to 6x. Suitable attention to the nose and throat is essential in colds, grip, tonsilitis and scarlatina. In my present practice my first duty often is an incision of the membrana tympani, which has been too often delayed by physicians or friends. A free, curved incision from below upward gives great relief. The patient should understand that this leaves the ear in better

condition for healing than does the spontaneous rupture. I promote discharge by suction and gentle inflation by the Politzer method.

I irrigate the ear once, but after the first treatment rarely use water or any solution; though in unduly prolonged discharge I use picric acid, 2 per cent., in the middle ear. Whatever cleansing may be needed is done by wiping, though this is usually but little or none when proper drainage is used. After the cleansing I pack with gauze—formerly wicking, which I preferred. For home treatment I supply gauze drainage rolls which may be applied by the patient or nurse. The ends may be moistened and dipped in powdered calendula, boric acid and hydrastis. When the drainage is removed it should leave the meatus clean, with no other treatment necessary than applying another roll.

While I am writing this an officer of the U. S. Army calls for advice with reference to an ear recently abscessed. The treatment at the hospital in Washington had been to irrigate once in four hours with saline solution and apply phenol in glycerine, 10 per cent. No gauze drainage was used. The treatment had been successful. This method may be more approved in hospital practice, but with the help of the small gauze rolls for home use I have had more success by gauze drainage.

Thus the bane of my early practice has been very greatly mollified. I take ear cases with pleasure and a clear conscience.

TOXICITY OF CERTAIN WIDELY USED ANTISEPTICS.—In the *Journal of Experimental Medicine* of May 1, 1918, Taylor and Austin record a study of this subject and conclude as follows:

1. The substances injected intraperitoneally into mice and guinea-pigs arranged in the order of their decreasing toxicity are: eucalyptol and brilliant green; mercuraphen; mercuri chloride and chloramine-T; dichloramine-T and proflavine; hypochlorite, Dakin's hypochlorite; Javelle water, and magnesium hypochlorite; iodine and phenol.

2. Now that Dakin's bland solvent, chlorcosane, is available as a vehicle for dichloramine-T, eucalyptol should probably be discarded for this purpose because of its much greater toxicity.

3. Inasmuch as experienced surgeons do not approve of the injection of solutions of iodine and phenol into closed cavities, it would seem advisable not to use any of the antiseptics here discussed in this manner as all exhibit a greater toxicity for mice and guinea-pigs than the two chemicals first named.

4. The method of testing toxicity of antiseptics by subcutaneous injection is not satisfactory because exudation and subsequent sloughing reduce the rate of absorption and make uncertain the amount finally absorbed.

EDITORIAL

WITH PEACE COMES THE NEW WAR, THAT ON VENEREAL DISEASES.

THE Treasury Department has issued a series of circulars to the medical profession and the public at large. These relate to the subject of venereal diseases, and should be read carefully and acted upon seriously by all public spirited citizens. The one before us bears the heading, "WAR ON VENEREAL DISEASE TO CONTINUE: COUNTRY MUST BE KEPT CLEAN." The statements made therein are indisputable and form the basis for these editorial remarks.

When the boys arrive at their home town, there will be rejoicings and celebrations. If proper thought is not given the subject, part of the celebration will relate to indulgence in vice which will be encouraged by the vampires who profiteer on the weaknesses of human nature. That young people are diseased for life matters but little to such human parasites providing them are enabled by vicious practices to add a little to their already ill-gotten gains.

"When men and girls are changing their occupations and breaking with old ways of life, when war disciplines are being removed and when spirits are buoyant, the greatest temptations to self-indulgence occur. Cities and towns throughout the country face now the most important crisis—the biggest emergency yet encountered in the fight against venereal diseases."

All physicians have heard of the frequency with which venereal diseases are acquired. It has only been the few that have had actual knowledge from the clinical experience gained by careful investigations of case histories who know the real truth. The public has likewise heard statements made of the seriousness of the evil, but has given the matter but little attention through a spirit of prudishness by some and an unwillingness to interfere by others. To those who know, certain types of blindness and operations for pus tubes told

of venereal infections almost as surely as if the confessions had been written on the faces of the victims. The seriousness of the situation has led some able clinicians to the conclusions that gonorrhoeics should never marry, for although it is too generally regarded as a trivial disease, as a matter of fact, it is curable with certainty only by systematic care by skilled physicians. Syphilis has received more attention in the sense that it has caused more alarm. Each year, however, adds to our knowledge its capability for damaging important viscera even unto the third generation. We are of the opinion that its importance as a cause of insanity and imbecility is even now greatly underrated.

From the beginning of the Great War in Europe, the dangers of dissemination of the venereal diseases were forced upon the community at large. It was an open secret that probably one-half of the combatant forces were infected in one way or another. Most horrible stories telling of the transmission of diseases to innocent victims of the lust of human brutes were in circulation. It is alleged that the authorities on the other side gave the matter no practical attention whatever.

With the entrance of the United States into the combat, our military authorities threw aside evasion and prudery and attacked venereal disease directly. The old shams and fakes about sex necessity and the need of licentious pleasure were thrown into the discard. From first to last, the Government maintained the position accepted by the best medical authority: viz., that continence is entirely compatible with health and that irregular sex intercourse with prostitutes and others is the most prolific cause of venereal disease. "The denizens of the underworld were driven out of the zones around each army camp and naval station; all the men in the camps were given extensive instruction; those exposed and infected were given prompt treatment; and various co-operating agencies furnished interesting, wholesome recreation. This program brought results. The venereal rate was lowered below that of any army of any nation in the history of the world. The war showed America not only the prevalence and seriousness of venereal diseases; it showed how and where to attack and conquer them."

"The examination of draftees showed that five men came

into the army with venereal disease to every one who contracted it after he was in the army. And the one who contracted it in the army, probably was infected in a civil community near camp over which civil authorities had control."

The Government next asks us to assume part of the responsibility of protecting the returning soldiers and sailors. This is not too much to ask, but it is one of Herculean proportions. Some may make the stereotyped reply, "It can't be done." But let us say, "*We will try to do it.*"

Next the Government tells us how to do it. Proposition number one says: "You can keep your red light district closed and suppress commercialized prostitution of all kinds." As stated in the circular the segregation of prostitutes and systematic examinations is a crass failure as a preventive. The cursory examinations given the fallen women we know to be a farce and a mere cobweb of protection to the licentious. The closing of the red light district does not end our difficulties, for the denizens thereof take themselves to boarding houses, rooming houses, etc., and ply their trade in cafes, dance halls, massage parlors, etc. The handling of vice in these quarters is even worse or more difficult than in the slums. This fact has caused many to claim that we had better permit the red light district to flourish than to scatter vice through hitherto respectable or quasi respectable neighborhoods. They say that we beat out the fire with a stick and scatter sparks promiscuously. True enough, but the sparks need light no fire if the outlying communities are properly protected by laws which fix personal responsibility.

The assertions that "an open town" means business, and that a place that does not tolerate vice is a dead one, should have no sympathy. In the first place they are not true, and in the second place, a community that profiteers on wrong doing must come to grief or disaster. Respectable citizens in the end pay the bills in the shape of higher taxes for the maintenance of prisons and asylums, and for lowered efficiency in the working forces of legitimate business.

Proposition number two calls for easily accessible and prompt treatment of venereal diseases. "Hospitals should be persuaded to admit venereal cases so that the number of carriers at large will be minimized." Here we strike a snag, for many men of large business interests have been so wrapped

up in their personal affairs for years, that they know but little or nothing of outside conditions, and as a result protest energetically against the utilization of hospital wards for venereal cases. It is within our recent knowledge that a hospital superintendent made an effort to evict a patient with a non-venereal disease because the history of the patient showed that he had a venereal infection. The contention is made that the offering of good hospital facilities is a premium on vice. In this campaign against venereal diseases we are striving for the protection of the innocent, who, after all, are the greatest sufferers. If State Boards of Health and the United States Public Health Service keep up their good work in maintaining venereal clinics and educate the people to the importance of the subject, we will drive out the genito-urinary quack and the low grade druggists. It is to the latter classes that a large number of the patients go for relief.

Thirdly, the Government asks us to educate people with regard to venereal diseases and sex matters. Ignorance plays a large part in most wrong doing. Mankind is inherently honest. Mental deficiency and limited education lower moral standards.

Finally we are asked to provide wholesome recreation for all. In other words, we are to keep all hands busy being good so that they have no time to be bad. "Satan finds some mischief still for idle hands to do," is as applicable now as it was a hundred years or more ago.

AND NOW COMES THE APPEAL:

"HOW ABOUT IT, MR. CITIZEN?"

"How do you stand on this program? It is no easy task. But venereal diseases have been controlled in other towns and they can be in your town. Mayors and chiefs of police, who have done their duty in war time, are not likely to relax their efforts now. If they do, they might be quickly aroused by citizens like you.

"Clinics, hospital wards, reformatories, homes for the feeble-minded, education and recreation cost cold, hard cash, but it can be proved that they are much cheaper in dollars and cents than the enormous industrial and human waste caused by the spread of venereal diseases.

"This is not a job for sentimentalists or fly-by-night enthusiasts. *It is a task for hard-headed business and professional men and capable women.* It is a job for citizens who feel responsible for their community and their nation in times of peace as well as war.

"RECONSTRUCTION.

"With war's final end, many war buildings, war jobs and institutions will go to the scrap heap. But every item in the program of venereal disease control is as necessary to successful peace as to successful war. Don't scrap your patriotism and community spirit in this matter. Make your blows knock-outs against vice.

"There should be no peace with prostitution, no truce with the red-light district, no armistice with venereal diseases.

"Unconditional surrender is the Government's demand from this enemy at home."

X.-E.

DR. STEARNS ON CASE TAKING.

A FRIEND has sent to us a copy of a reprint by Dr. Guy Beckley Stearns of New York City, entitled, "Case Taking." We have always had an active interest in such articles. Dr. Stearns's paper is especially interesting to us as it has a more or less direct bearing upon the subject of our recent State Society paper bearing the title "Modernization of Homœopathy." Hence it is that we see fit to discuss his teachings.

The article bears the impress of a judicial mind, and is systematically thought out. The author makes no claims for novelty. He merely elucidates a practical system for recording illness. Quite properly he divides record taking into two parts: 1. That relating to the history of the illness and the physical signs for purpose of diagnosis and prognosis; and 2. The recording of special symptoms peculiar to the case, and which may or may not have a diagnostic value, but are especially desirable of record for therapeutic purposes.

Dr. Stearns is more of an optimist than are we. If his results are to be duplicated by those pessimistically inclined, his methods should be followed strictly. By so doing not once but over an extended period of time, opportunity is afforded for what might be called investigation on an extended scale,

and the tabulation of results enables us to form definite conclusions which should convince our readers. An occasional brilliant result in a single case has but little more value than an interesting anecdote.

The technique of Dr. Stearns proceeds as follows:

1. **PATIENT'S STORY.**—Herewith he starts with the usual instruction that the patient be permitted to tell his story without interruption, excepting so far as may be necessary to keep him to the subject matter in hand. Then he lays great stress, which many examiners neglect, of making inquiries concerning each of the symptoms mentioned with the idea of obtaining more definite information concerning them. If the symptoms are not carefully recorded on paper, the examiner is almost certain to neglect important data in what might be called a cross examination. Special stress is laid upon the importance of describing sensations as to character, duration, time of appearance, etc.

2. **MODALITIES.**—The author accepts Boger's definition of a modality, as follows: "The natural modifiers of sickness" and as including all circumstances of aggravation and amelioration. He even advises that under appropriate conditions the modalities of numerous symptoms present be made the subject of investigation in this particular. The most important modalities include: a. Time of day or night, periodicity, season; b. Temperature, weather, open air; c. Motion, position, touch, pressure, jarring, light, noise, sleep, eating, drinking. Then he adds that inquiry as to special modalities may prove applicable in special lines of diseases.

3. **CAUSE AND HISTORY.**—We would prefer to bring this heading first, as we feel that it logically belongs at the beginning of a history. Patients are not always wise in their expressions as to the causes leading up to an illness, still it does no harm to learn of their ideas on the subject, and may do much good. Later the physician may make special investigation to determine the etiologic factor himself. We are in special sympathy with the advice, "Observe carefully those symptoms that naturally group themselves together in a case, known as concomitants, such as hot head and cold extremities, dry mouth without thirst, face becoming red with the cough, etc."

4. **GENERALITIES.**—"Generalities are those conditions of aggravation or amelioration that have to do with the patient

as a whole, and are obtained by putting the questions something like this: Are you in general better or worse from heat than from cold, wet or dry weather, etc., regardless of any special part of the body."

"The generalities can be divided into four easily associated and remembered groups:

a. Time of day or night, periodicity season.

b. Cold, heat, dry weather, storm, before storm, thunderstorm, wind, sun, out of doors, warm room, draft, bathing, change of weather, takes cold easily.

c. Motion, position, lying on painful or painless side, mental exertion, exercise.

d. Sensitiveness to light, noise, touch, music, odors."

Finally comes the advice as to investigation of functions, which we quote in extenso:

1. *Digestive Function.*

Alternation of taste.

Appetite: Ravenous; wanting; capricious; quick satiety; loathing of food; good appetite but losing flesh.

Cravings and aversions; aggravation from special articles of food.

Eruclatations: character of and amelioration after.

Thirst for large or small amounts. Thirstlessness.

Desire for cold or warm food or drink.

General aggravation or amelioration after eating or drinking.

Constipation: With urging or with no desire; with soft stool; alternating with diarrhœa. Character of stool.

2. *Sexual Organs.*

Any disturbance of the sexual function.

Menstruation: Early; late; irregular; profuse; scanty; protracted; of short duration; character of discharge.

General aggravation or amelioration before, during or after menstruation.

Leucorrhœa: Its character and modalities.

3. *Sleep.*

Sleepless: Sleepy but can't sleep; sleepless from active thoughts.

Sleepiness: Stupor.

Restless sleep; jerking or crying out in sleep; wakes frightened.

Dreams and their character.

General aggravation or amelioration after sleep.

4. *Skin.*

Dryness; oiliness.

Inability to perspire; profuse sweat; sweating from slight exertion; local sweat; character of sweat; aggravation or amelioration from sweat.

Color and appearance of skin.

Local coldness or heat.

Easy suppuration.

Chill, fever and sweat: Note if in normal sequence or if occurring independently or irregularly. Concomitants and modalities with each stage.

5. *Mind.*

The mental symptoms are purposely left until the last, because by the time the rest of the case is taken, the patient will either have revealed his mental state, or he will have so entered into the spirit of it all, that he will readily and understandingly give them to the physician.

Mental symptoms are among the most important, but a full understanding and appreciation of them comes only with experience.

A complete exposition of them would require a long article in itself. It is sufficient here to state the important groups into which they fall.

First understand that the most important ones have to do with those strong likes and strong dislikes that are contrary to the patient's normal state of mind, *e. g.*, aversion for company, or family, or light, etc.

Then there is the irritable group, such as:

Irritability, restlessness, hurry, intolerance of pain, starting at slight disturbance.

The depressed group, such as:

Depression, sensitiveness, despair, suicidal thoughts or tendency, aggravation from consolation.

The fear group, including all phobias.

Intellectual and emotional aberrations, such as:

Delirium, delusions, loquacity, jealousy, suspicion, indifference, haughtiness.

Note such aggravations as occur from mental exertion, excitement, fear, anger, grief, shock, mortification.

Miscellaneous.

Finally gather such information as is suggested by the questioning and also the following miscellaneous information:

Personal history from birth to present. This is well taken up in ten-year periods. Note all conditions that might have a bearing on present trouble, such as: Former diseases, injuries, pregnancies, miscarriage, mental shock, grief, disappointment, wounded pride, humiliating habits or experiences.

In lack of reaction note especially tuberculosis, gonorrhœa, syphilis and vaccination.

Habits: Tea, coffee, alcohol, drugs, food, bathing, occupation.

Family History.

Father, mother, brothers, sisters. Inquire as to tuberculosis, syphilis, cancer and insanity.

Objective Indications—

In unconscious patients and in infants, all the indications are objective but none the less striking.

In all cases observe particularly the patient's general behavior; his position, if quiet or restless; motion of any special part, twitchings.

Expression of face, color and appearance of skin, sweat, local or general.

Hunger, thirst, distention, involuntary or suppressed discharges.

Sleep, stupor, delirium, crying out.

Note eyes, ears, nose, mouth, tongue, throat.

Relation of pulse, temperature and respiration to one another.

Necessarily, a system as elaborate as is the one advocated by Dr. Stearns requires an abundance of time for carrying it out. Still the sick are worthy of the best efforts of their physicians.

Necessarily also such a system is not applicable to all classes of practice. Nevertheless it is capable of modification to suit any and all conditions, and if adopted is bound to react favorably upon the science of therapeutics and upon the literature of our school.

X.-E.

GLEANINGS

PROPHYLACTIC VACCINATIONS AGAINST CATARRHAL INFECTIONS OF THE RESPIRATORY TRACT.—John W. H. Eyre and Captain C. E. Lowe report the results of a series of prophylactic inoculations with mixed vaccines against purulent bronchitis and respiratory catarrhs in New Zealand troops in England. In January, 1918, 327 cases of measles and rubella, all of a mild type, occurred among members of a certain reinforcement of the New Zealand Expeditionary Force, which had arrived in England on the 7th and 9th of that month. During February a further 124 cases were admitted to hospital, and of these 24 died. An investigation revealed the fact that the exanthem was usually complicated by "purulent bronchitis," clinically identical with an outbreak which occurred in the Aldershot command early in 1917. The bacteriological findings were: *B. influenza* was present on one or more occasions in 12 out of 14 sputa examined, usually associated with *Streptococcus longus* and various types of *Micrococcus catarrhalis*. In fatal cases the heart blood and spleen showed the presence of *Streptococcus pyogenes longus* with marked hemolytic properties. Morbid histology of pulmonary tissues consisted chiefly of a purulent bronchitis and peribronchitis associated with area of edema, areas of collapse, and patches of lobular bronchopneumonia, while at the bases of the lungs the process tended to involve larger areas, and, in rare instances, to progress to complete consolidation. The incidence of rubella and morbilli must be regarded, therefore, in many instances as a predisposing cause producing the initial lowering of resistance which facilitated the entry of the *B. influenza*; in other cases the eruptive fever appeared to be merely a coincidence. The few blood counts that were made showed a slight but distinct polymorphonuclear leucocytosis, not only relative, but also absolute. Bearing in mind the susceptibility of the average New Zealander to infections of the respiratory tract, it was decided to attempt to immunize reinforcements by prophylactic inoculation against catarrhal infection, and arrangements were at once made for the vaccination of the entire personnel of the two most recent reinforcements in England. A multiple vaccine was prepared from organisms contained in the secretions of purulent bronchitis and in the sputa of other catarrhal cases among the troops in England. The vaccine was prepared in two strengths, the dosage to be 5 c.c. on each occasion, the second dose, *i.e.* the stronger vaccine, to be administered ten days after the first. The initial dose was given to 2081 men; in 97.7 per cent. there was no reaction, in 2.0 per cent. the reaction was slight, and in 0.3 per cent. severe. The number of men who received the second inoculation was 1627; in 98.8 per cent. there was no reaction, in 0.7 per cent. slight reaction, in 0.4 per cent. severe reaction. A statistical record was made of the results of vaccination in the first 1000 cases inoculated and this has been compared with the average of all respiratory complaints occurring per 1000 among uninoculated New Zealand troops in the United Kingdom from March 15,

1918, to August 18, 1918. This shows that whereas only 12 cases of respiratory complaints among the inoculated men were admitted to hospital, the average among uninoculated troops was 73.1 per 1000. Anticipating a "negative phase" as a result of inoculation, the authors arranged that all cases, however trivial, should be admitted to hospital; 15 admissions were reported between the first and second dose of vaccine, and 82 during the ten days following the second inoculation. The authors therefore suggest that the initial dose might be larger, or the interval between the two doses a few days longer. The effect of the inoculation was demonstrated in June, when a widespread pandemic of influenza commenced, the prime factor being the *B. influenza*, associated in severe cases with other catarrhal organisms. The incidence of this epidemic was appreciably less among the inoculated men, being 2 per 1000 as against 28.4 per average thousand. Serological tests were made in the case of 20 New Zealand soldiers both before and after inoculation and 10 English soldiers who had not received any catarrhal vaccine or suffered more than ordinarily from catarrhal complaints. The number of cases was too small to permit of much weight being accredited to the results, but it would appear (1) that the average colonial, just arrived in England, has only about 50 per cent. of the natural immunity to the organisms of catarrh prevalent in England that the average English soldier enjoys; (2) that as a result of catarrhal vaccination his immunity can be considerably increased, and (3) that, at any rate for a time, his specific agglutinins to catarrhal organisms exceed in amount those of the average Englishman.—*The Lancet*.

ANGINA PECTORIS.—In the *Journal of the American Medical Association* of April 6, 1918, Ingals and Meeker state their belief that during the attack, if prolonged and severe, morphine, or morphine and atropine, given together hypodermically, are the most common remedies. They are undoubtedly necessary in many cases, but they usually disturb the digestion and make the patient feel badly for two or three days, so that it is much better to give the nitrites first and rely on them when they will answer the purpose. Whisky in quantities of about 3 ounces will also give relief. Hot applications over the sternum, as an electric pad, are sometimes helpful in relieving pain. Balfour recommended chloroform to be inhaled from a wide-mouthed bottle in which about a drachm had been placed on a sponge. The bottle was to be held in the patient's hand so that, as he came under the influence of the anesthetic, the bottle would drop and roll away. Allbutt considers chloroform dangerous. The writers do not know its value from personal experience in angina pectoris, but they have found this method of administration very effective and safe in some other painful conditions.

On account of its reputed effect in contracting the arterioles, digitalis is not suited to relieve an acute attack. In sixty cases Ingals observed, in which the condition of the heart and pulse was recorded, the heart was apparently normal in thirty-six cases, and the pulse did not exceed 85 in twenty-six cases. In only eleven cases did the myocardium or valves appear to be involved, in only nineteen did the pulse run from 85 to 90, and in only twelve did it run higher than 90 at the time of Ingals's examination.

To prevent the attacks, it is of first importance that the patient live a regular life, and avoid overexertion, mental excitement, chilling of the surface, and, indeed, anything that brings on pain.

Moderation in eating should be enjoined, especially on those who are overweight, and mild measures for reducing the obesity should be instituted. Tobacco, coffee, and sometimes even tea should be avoided. Flatulence should be relieved by such remedies as rhubarb, gentian, and the carminatives, as peppermint, cardamom, and ginger. The *Bacillus bulgaricus* has been quite effective in preventing flatulence in some persons. The secretions must be free and the bowels must be kept open.

Rest, especially in the early stages or when the attacks recur frequently, is of the utmost importance; but the patient's temperament must be considered, and the physician must not demand what to the patient seems impossible. Ingals is impressed with the idea that rest and diversion with graduated exercise are the greatest factors in the beneficent effects of baths of the type given at Nauheim. Essentially the same baths may be given at home, by adding nine pounds of sea salt and ten ounces of commercial calcium chloride to forty gallons of water. Calcium chloride is probably the most essential ingredient. The carbonic acid gas appears to Ingals negligible except for its psychic effect.

THE INFLUENZA PANDEMIC.—The *British Medical Journal* of July 15, 1918, give the following useful facts which may possess interest for us on this side of the Atlantic at any time:

The influenza that we read so much about in the daily papers seems to have visited almost all the countries in Europe, civilized and barbarian alike. It appears to have been particularly wide-spread in Spain during the month of May; that there were eight million cases of the disease in that country, as was alleged by the French press at the time, is a statement requiring perhaps a grain of salt for deglutition, but certainly pointing to a very heavy incidence. Information reaching this country through Holland indicates that the epidemic has been very prevalent both in Germany and Austria, and it is said that the armies of the Central Powers on the Western Front have suffered severely. Many cases have occurred in the allied armies, and the French civilian population is no more exempt than our own.

The disease among our own people appears to be no more severe, speaking generally, than it is reported to have been in Spain. The onset is often peculiarly sudden, the victim being struck down with dizziness, weakness, and pains in various parts of the body, suddenly while on duty or in the street. There is a sharp rise in temperature to 103° or 104° F., and complaint is chiefly made of headache, pain in the back, and photophobia. The throat feels a little sore, the pharynx is congested, in some cases laryngitis and signs of bronchitis appear. Curiously enough, the sign to which Marris recently drew attention in trench or louse fever—namely, lateral nystagmus with suffusion of the conjunctivæ—has not rarely been found in these influenza patients. In many cases the fever falls in three or four days, and the patient recovers rapidly. In others the course is longer, and the continuance of an irregular pyrexia may be accounted for by bronchitis, or, in rare instances, by capillary bronchitis, bronchopneumonia, or even the discovery of the bacillus of influenza in the circulating blood. Few cases, so far as they are informed, have proved fatal; in some such the cause of death has been acute bronchiolitis with increasing cyanosis and terminal failure of the right heart.

Influenza of the gastrointestinal type has not been common; such a diagnosis is, indeed, by many held to be questionable at any time, and par-

ticularly so at the present moment when cases of food poisoning or acute disturbances due to the unusual character of meals nowadays are not infrequently encountered. The many complications and sequelæ by which in times gone by epidemic influenza made itself remembered seem to be happily rare. This circumstance has been held to show that we are not now dealing with an epidemic or a pandemic of influenza at all; but bacteriological evidence is accumulating to prove that the influenza bacillus is responsible for at least a considerable proportion of the cases. Swabs taken from the inflamed pharyngeal surface generally show a varied bacterial flora, perhaps with pneumococci and what at first sight appear to be pneumobacilli predominating, and micrococcus catarrhalis, streptococci, staphylococci, and other microbes as well, but no obvious influenza bacilli. Cultures, however, are said to give grounds for the belief that these pneumobacilli are in many cases influenza bacilli of aberrant type—the organism is notoriously polymorphic—and not the true pneumobacilli of Friedlander at all. It may be added, too, that the pneumococci are in many instances of the saprophytic type, and not pathogenic to guinea-pigs. In other cases the throat swab shows typical groups of influenza bacilli directly, as well as on culture. The incubation period of the disease, a thing not easily to be established in the community at large where so many victims and carriers occur, would seem to be about forty-eight hours or less; at any rate, its spread from bed to bed in hospitals has been observed to take place at that rate.

As for the treatment, bed and the exhibition of some salt of quinine or of aspirin seem to be indicated; the use of gargles appears not to influence the course of the disease, but the free use of aspirin certainly mitigates the patient's discomfort. In the matter of prophylaxis, as in the prophylaxis of cerebrospinal fever, free ventilation is imperative; and after that we come up against the deplorably low standard of public conduct that prevails in the matter of coughing, sneezing, and spitting without the use of a handkerchief. Without doubt the virus of influenza is transmitted from one person to another in the vehicle of droplets of nasal and bucco-pharyngeal mucus, disseminated broadcast in the unguarded spasms of coughing, sneezing, and spitting to which people with coughs and colds, whether influenzal or not, are so objectionably prone. How much better it would be for all of us, and how fatal to the spread of influenza *et hoc genus omne*, if we could all go back to our childhood, and learn once more with the thoroughness engendered by the fear of, say, an instant smacking, never to cough or sneeze without first covering both mouth and nose with a handkerchief!

THE STATUS OF TONSIL OPERATIONS.—The *Boston Medical and Surgical Journal* of April 18, 1918, discusses this ever interesting question for the general practitioner and specialist. It says that in spite of the many modern advantages in medicine very little, if anything, is yet known concerning the functions of the tonsil. Being a ductless gland, it has been thought to be part of the endocrine system, but no connection therewith has been found, and, indeed, removal of these glands seems to have no effect on the organism. There are those who believe the glands to be vestigial in character, not having any function at all, and best removed from the body whether giving symptoms or not. A plausible, though unconfirmed, hypothesis is that these glands act as mechanical barriers to the passage of irritating or infective agents. When it is remembered how often these glands are the seat of numer-

ous infections, this hypothesis receives added weight. The tonsils are considered to be the portals of entry for many specific infections, but particularly of the infections causing rheumatism and endocardial conditions.

Tonsil operations have been carried out for a long time, but heretofore they have been very lightly undertaken. Practically no line was drawn between cases that needed removal and those that did not. Yet it goes without saying that unless a tonsil is so large that it obstructs the passage or is the frequent seat of inflammations, surgical interference is not justified, at least until more is known concerning the function of this gland. Moreover, tonsil operations are no longer undertaken by the unskilled. These operations have had a remarkable metamorphosis from minor to major surgical operations. This has in a measure been the natural outgrowth from the reports of increasing fatalities from those supposedly minor operations. The clinic, or even the home, is no longer considered a fit place for this operation any more than for other surgical operations of admittedly major significance. The operation must be surrounded by all the safeguards that a hospital can afford if bad results would be reduced to a minimum. Besides, American surgeons are in favor of doing all these operations under anesthesia. Local anesthesia, however, should be consistently removed from the list of available anesthetics for tonsil operations because there is no means of knowing the amount and the rapidity of absorption of the cocaine, and because of the danger of subsequent severe hemorrhage. Cocaine is a particularly treacherous drug, having caused many fatalities, and without any warnings of danger. Neither is chloroform favored as a general anesthetic in these operations, also because it is very treacherous in its action, and there does not seem to be sufficient justification for subjecting a patient to this special danger for an operation not of vital necessity. It seems that the ideal anesthetic for tonsil operations is ether, preceded by nitrous oxide.

The mere cutting off of the redundant tissue from the tonsil—tonsillotomY—is no longer in favor. It is considered very poor surgery. Recurrences are usual. This procedure merely exposes a large surface to infection, and for a time at least, until healing, causes an increase of the very conditions that the operation is intended to obviate. If this operation is decided upon as necessary, then the only procedure of choice is complete removal, enucleation—tonsillectomy. The gland should be dissected out, preferably with a blunt instrument, and hemorrhage controlled as in any surgical operation. Styptic drugs or like measures are neither necessary nor advisable. Carried out from this standpoint, tonsil operations need cause little fear of untoward results.—*Therapeutic Gazette*.

PAROXYSMAL TACHYCARDIA.—In the *Lancet* of April 13, 1918, Price admits that the results of treatment of this disorder, in the great majority of cases, are very unsatisfactory. It is true that the paroxysm not infrequently ceases when various remedies are applied; thus, bringing up of wind, the act of vomiting, the adoption of a certain posture, pressure upon the vagus—particularly the right—friction of the chest-wall and local applications in the form of an ice-bag, mustard leaves, or warmth to the precordium, may be followed by relief. But it should be remembered that the nature of the disorder is to stop suddenly, and, therefore, the question of *post hoc, propter hoc* always arises. As far as Price's observations have gone the remedy which offers most encouragement is strophanthin injected intravenously.

One dose of 1-100 grain, or two or three doses of 1-250 grain, every two hours, may be administered. Failing this, digitalis should be given by the mouth and pushed to the full physiological action. If there be indications of heart failure, such as dyspnea, cyanosis, or dropsy, these should be treated on general lines.

Between the attacks the general condition, and whatever appears to be the exciting cause of the paroxysms, should receive attention. Any gastro-intestinal disorder should always be corrected. Bromides may be tried. In one case—and in one only—in Price's experience, the continuous administration of digitalis proved effective.—*Therapeutic Gazette*.

CARDIAC SYPHILIS.—In the course of a paper in the *American Journal of the Medical Sciences* for May, 1918, Moore after discussing somewhat in detail the whole question involved, closes by saying that a cure of cardiac syphilis is hardly to be expected under any circumstances, but an amelioration of the symptoms and a prolongation of life in comparative comfort may be expected when proper treatment is instituted early. Even in late cases proper treatment will do much good, but after cardiac decompensation has set in it is unusual for any treatment to do more than slight good, and such cases usually end fatally within a comparatively short time. There were two cases with decompensation under his observation recently. One derived no benefit from any treatment and ended fatally in a short time; the other improved somewhat under rest, digitalis, mercury, and salvarsan, and left the hospital, but was never able to return to work and has again more recently returned to the hospital for further treatment. Brooks and Carroll state that when treatment has been interrupted, as in this instance, and is later resumed again, one rarely gets as prompt and satisfactory a response. This observation is exemplified in this patient.

Treatment of cardiac syphilis should be mainly antisyphilitic and intensive. It should differ but little, if at all, from the treatment of syphilis generally, except in so far as the cardiac involvement may be seen to be affecting the patient. The principal object should be to destroy the spirochetes in the tissues as quickly and as effectively as possible, and therefore antisyphilitic treatment should be pushed to the limit of tolerance. As to specific medication, there can be no cut and dried rules that will apply to all cases. Each case must be treated individually. Mercury by deep injection, preferably one of the soluble salts, and salvarsan intravenously are both to be used. There appears to be but little choice between the old and the new salvarsan, but personally, from a rather limited observation, Moore is inclined to prefer the old. There is some question as to the use of salvarsan in acute endocarditis but used in small dose often repeated, rather than in full dose, Moore believes it to be safe. The iodides are apparently of no use in the early cases, though possibly helpful in old lesions. Improvement is prompt, as a rule, in all cases, though of course more marked in early cases, and cardiac decompensation always offers a poor prognosis. In the early cases the patients must avoid cardiac strain until their cardiac symptoms are in abeyance; otherwise cardiac treatment is not indicated. In long-standing cases, when circulatory disturbance is more marked, improvement often takes place promptly under specific treatment alone, but, as a rule, it is almost always advisable also to place these patients under the usual hygienic and therapeutic treatment indicated by the circulatory condition, mainly rest and digitalis.

According to Brooks and Carroll, Anders, and others, treatment should be continued for at least one year after all signs of activity have subsided, and irrespective of a negative or a positive Wassermann, antisyphilitics should be administered from time to time throughout life.—*Therapeutic Gazette*.

AMEBIASIS: ITS RADICAL CURE WITH COMBINED EMETINE AND SALVARSAN PRODUCTS.—To the *California State Journal of Medicine* for May, 1918, Gunn contributes a paper in which he states it would appear from his observations that a radical cure of amebiasis can be effected but rarely with emetine hydrochloride alone, and he thinks this is the consensus of opinion at the present time. From a very limited number of observations the same would seem to be the case with salvarsan and neosalvarsan used alone.

The combined use of emetine hydrochloride and salvarsan, neosalvarsan, or novarsenobenzol may be expected to produce a radical cure in a large proportion of cases if the arsenic compound is injected while the patient is well under the influence of the emetine. The treatment as carried out by this method is far more rapid, less severe, and apparently much more efficacious than with most of the old methods of treatment.

THE RESULTS OF TREATMENT IN PERNICIOUS ANEMIA.—The *Bulletin of the Johns Hopkins Hospital* for May, 1918, contains a long article on this subject in which an effort has been made to analyze the results of treatment in a number of cases from a purely objective point of view. Clinical impressions have been disregarded and no attempt has been made to promote or discredit any particular therapeutic measure. It should be recognized that such statistics lead to only general conclusions which allow of exceptions in individual cases. The results may be summarized as follows:

1. No definite evidence has been found that either transfusion, splenectomy, or elimination of foci of infection prolongs the life of patients suffering from pernicious anemia.
2. Transfusion performed at a time when the patient was not refractory brought on remission in about half the cases, and enabled the blood count to be raised to a higher level than it reaches in cases not so treated.
3. Such artificial plethoras did not increase the duration of the remission, although the patients usually had a sense of well-being while the count was high.
4. At other times the same patients were refractory to transfusion as well as to other methods of treatment.
5. The central nervous system symptoms were as little benefited by transfusion and splenectomy as by other methods of therapy.
6. Transfusions of blood were not "held" better after splenectomy than before.

THE MODERN CONCEPTION OF DIABETES.—The *London Lancet* says that diabetes has always been characterized by the excretion of sugar in the urine. Previously the generally accepted treatment has been to exclude carbohydrate from the diet, but, at that, the patient still excreted sugar. The source of this sugar has been traced to protein. Protein consists of some eighteen aminoacids. Some of these are converted, in diabetic patients and in experimental animals (depancreatized, phloridizinized) into glucose. Another origin of carbohydrates in diabetics is fats; but this is not of outstanding importance.

The acetone, acetoacetic acid, and oxybutyric acid which are characteristic of severe cases of diabetes have been proved to be derived from the fat of the food, but they may also arise from protein. Acetoacetic acid is the primary product, oxybutyric acid being a reduction product of acetoacetic acid. The production of acid was formerly thought to be the cause of diabetic coma, but the coma is really due to the toxic action of acetoacetic acid. Since acetoacetic acid is a ketonic acid, the term ketosis might be used in preference to acidosis. Though acetoacetic acid may, theoretically, be derived from carbohydrate, this source may be excluded, according to the latest work done by Hurlley.

Glycosuria is then derived from the carbohydrate and protein of the diet; the acidosis, from the fat and to a small extent from the protein. The diabetic uses the carbohydrate of the food too slowly; some of his carbohydrate he derives from the protein and fat leading to more decomposition of these than normal and the production of more acetoacetic acid, which is reduced to oxybutyric acid, and excreted, instead of being oxidized as normally.

The modern treatment of diabetes as described by Dr. E. P. Poulton in his Goulstonian lectures is to reduce the amount of all kinds of food stuffs to the lowest possible limit, thus reducing the quantity of the excretory products. The mortality in Guy's Hospital has been reduced from twenty-three per cent. in the ten years previous to 1916, to seven and seven-tenths per cent. since 1916, owing to the adoption of this method of treatment. The carbohydrate disappears from the urine and there is less acetoacetic acid. By careful addition of carbohydrate to the diet the patient's tolerance for carbohydrate is determined; similarly the protein and fat amounts are adjusted. By this method of treatment the patient may attain a diet of 1,500 to 2,000 calorie value, the lowest possible limit for the normal individual.

A METHOD OF CITRATED BLOOD TRANSFUSION.—Robertson (*British Med. Jour.*), says that the use of citrated blood for transfusion seems to fill a definite need in that the technic is relatively simple, easily acquired and can be carried out entirely by one medical officer. Furthermore, this method obviates the necessity of having the donor and recipient together, and the blood can be given at the bedside. Stress is laid on the fact that although the technic is apparently simple, certain definite precautions must be observed in the handling of the blood in order to obtain good results. The chief considerations in the technic are to get the blood quickly and cleanly into the citrate, to obtain prompt and thorough mixing of the blood with the citrate and to transfuse the blood so soon as possible after the bleeding. An apparatus is described which can easily be constructed and has been found to work satisfactorily. The blood is received into isotonic sodium citrate, 3.8 per cent. The amount of this solution, 160 c. c., contains 6 grams of sodium citrate, which has no harmful effect. When a good flow is maintained through a needle of adequate caliber and the blood and citrate are well mixed as large a quantity as 800 c. c. of blood may be obtained by this method. A series of 44 citrate transfusions were given under rush conditions at a casualty clearing station, with good results. The immediate effect of the transfused blood and subsequent progress of the cases were fully as good as that seen following ordinary transfusion. No reactions of any consequence were observed.

THE CONDITIONS UNDER WHICH THE STERILIZATION OF WOUNDS BY PHYSIOLOGICAL AGENCY CAN BE OBTAINED.—Wright and Fleming, in *The London Lancet*, state that after extensive experimental and bacteriological work, they have drawn the following conclusions:

1. It has been erroneously inculcated that every wound should be sterilized before closure; and that therefore primary suture should be avoided and secondary suture undertaken only after a course of antiseptics. There is now no question, with respect to primary suture, that the wound taken after early surgical cleansing and resection is as good as sterile, and with respect to secondary suture, undertaken with a wound condition and a purely saprophytic infection, that such an operative procedure, provided it leaves behind no infected dead spaces, directly contributes to sterilization.

2. It has been taught that one should judge of the fitness of the wound for closure by necropycocultures and direct microscopic examination of the pus. It would be infinitely more reasonable to base one's judgment upon the results of biopyocultures.

3. It has been taught that suture cannot be successful in a wound containing a haemolytic streptococcus pyogenes. It has been seen that leucocytes can, given proper conditions, successfully combat this, and of course all other streptococci; and that these conditions can be realized in connection with the suture of wounds.

4. It has been taught that for the removal of sloughs from focal wounds chemical solvents are required. They have learned that sloughs can be removed by tryptic ferment set free from disintegrated leucocytes, and that the liberation of this ferment can be greatly accelerated by breaking down the leucocytes in the discharges with hypertonic saline solution.

5. Lastly, it has been taught in connection with antiseptics that sterilization is obtainable only by continuous or very frequently repeated applications. They have learned that there is nothing to prevent any part of a wound surface which has been washed quite clear of albuminous matter being sterilized by a single application of antiseptics.—*Charlotte Medical Journal*.

HEART RESERVE IN MILITARY TRAINING.—Alfred Johnson says that in the medical examination of recruits for the army to designate their category, and later in noting their general fitness or otherwise as a result of training, the condition of the heart often proves to be the final index of the man's capabilities for military service. Defects such as impaired functions of the limbs, hernia, chest, kidney, and nervous troubles, etc., are usually estimated at their true value, because of the comparative ease of accurately investigating their condition of activity.

It is not wished in any way to minimize the importance of careful observation by inspection, palpation, percussion, and auscultation of the organ, noting the condition of the blood vessels, and from these data forming an estimate of the condition of the heart. What it is wished to emphasize is, that the estimate found by these methods applied in a room, when the patient is practically at rest, is often a source of serious error in predicting the man's capacity for military training.

Too much importance seems to be attached to the presence or absence of valvular troubles, or murmurs, and too little to what actual capabilities of the heart may be, and the amount of reserve that it can draw upon for military training.

The present methods of army examination, unfortunately, often place men in a category in which they prove quite unable to stand the strain of training and the duties of that category, on account of insufficient heart reserve, and they are passed from hospital to duty and duty to hospital until they are finally discharged from the army. This involves a useless expenditure, which might be better employed under these conditions.

These men with insufficient heart reserve might be much better employed in civil life, where experience has taught them the limitations of their strength. If, however, heart reserve was taken into account in the process of training, and this reserve never overdrawn upon, very many of these men might be turned into effective soldiers instead of being broken down by an arbitrary system of hardening.

If the gauge of heart reserve held the important position it deserves, many men with ample heart reserve might be placed in a higher category than the one they occupy, with the certain knowledge that they would be able to stand the training of that category.

What is required is some fairly reliable method of checking the findings of examination of the heart under restful conditions, by ascertaining its capabilities under strain and load. The heart is the most nearly mechanical of the vital organs. It is obvious that it would not be a reliable test to judge the capabilities of a motor engine when it is just ticking over with a minimum load: it must be tested under varying conditions of load and strain to find a correct estimate of its capabilities. So with the heart: the measurement of the soldier's heart reserve under varying conditions of load and strain would do much to make our army more effective. Over-training is more disastrous than under-training. The amount of training that can be undertaken with progressive benefit depends on the state of the myocardium. It must be a correct balance between the *vis a tergo* and *vis a frontis*.

In carrying out a scheme for finding the limitations of the heart reserve, standard and varying physical strains would be necessary for the test. Marching progressive distances, parades, physical exercise to pick out the weaklings and, for those who showed ability for severe strains, doubling on the level and uphill.

An old but reliable test might be applied: that of taking pulse-rate before the test, allowing five minutes to elapse, or for the more severe strains five minutes after the test, and then timing the pulse-rate again. If, after comparing the results, it is found that the pulse-rate is accelerated, this man is doing too much; repetition will only lead to further dilatation of his heart, and he should be put to training involving less strain.

The test for any but those who have managed the severest tests should be applied at intervals of from one week to one month, according to the requirements of the case. Thus, each would be trained according to his capabilities, and there would be no opportunity of deceit or fraud on the part of the man under observation.—*Charlotte Medical Journal*.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

REMEDIES FOR INFLUENZA.—Dr. Guy Beckley Stearns, *Homœopathic Recorder*, writes that in our eastern states the following have been the remedies most frequently indicated:

Arsenicum album. cures some of the worst cases which begin with prostration, pain in the forehead, burning throat, excoriating coryza, extreme thirst for small amounts, restlessness, and post-midnight aggravation; the patient is chilly and wishes to be covered, although the headache is relieved by cold water. The keynote to remember are:

Prostration.

Restlessness.

Thirst for small amounts.

Chilliness.

1 a. m. aggravation.

Close observers state that the most virulent cases occur among those who have had immunizing inoculation against typhoid and smallpox, and in these cases *Arsenic* has most often been indicated.

Bryonia cures the cases which have soreness of all the joints, which are tired, which want to be quiet; the cases which have bursting or dull headache; dry cough that hurts the head, the chest, or the abdomen; mouth dry, generally with thirst for large amounts (though often without any thirst), easy sweat, sharp pains in the chest or in other parts of the body, with aggravation of all symptoms from motion. The keynotes are:

Great aggravation from motion.

Desire to lie curled up like a dog.

Mouth dry, with or without thirst.

Sharp pains in chest, and headache worse from coughing.

Dry, hacking cough.

Bryonia cures not only the influenza but the sometimes ensuing pneumonia with the above symptoms; in *Bryonia* pneumonia the patient wants to lie on the affected side.

Gelsemium cures the cases that have great languor, aching and chilliness in the back, lack of thirst, a band-like headache, and a besotted look, with heaviness or ptosis of the upper lids. The keynotes are:

Besotted appearance.

Heavy eyelids.

Lack of thirst.

Chilliness of the back.

Eupatorium cures the cases which have great aching in the bones, chilliness, thirst and sweat. The keynote is:

Aching in the bones.

Belladonna cures the cases which begin suddenly with flushed face, bright staring eyes, red and sore throat, and mental excitement. It covers the cases that relapse, where in the afternoon there is a sudden rise of temperature with the above-mentioned symptoms. Headache may be present with throbbing carotids and marked aggravation from jarring. These patients become actively delirious at night. The keynotes are:

Active mental excitement.

Bright staring eyes.

Brightly flushed face.

Sudden onset in mid-afternoon.

Hyoscyamus cures the cases which have delirium at night, more of the typhoid type. They throw off the covers, pick at the bed-clothes, sing, talk with people not present, have dry, red tongue, dry lips, and sordes on the teeth. Patients who reach this stage before *Hyoscyamus* is administered may die, but when the trend is recognized early enough the remedy will save them.

In the pneumonias:

Byronia cures the cases with the symptoms already enumerated.

Veratrum virid. cures the cases with high fever, foul breath, and with a red streak down the center of the tongue.

The *Veratrum virid.* keynotes are:

Foul breath.

Red streak down the center of the tongue.

Phosphorus cures the cases which have great oppression of the chest, tight cough, hoarseness, evening aggravation, craving for ice-cold drinks, and inability to lie on the left side. It cures cases which relapse and have hoarseness and a tight feeling in the chest also hemorrhages from bowels and bloody stools as a consequence of drugs.

Antimonium tart. cures the cases which have blue lips; cold sweat on face; rattling in chest, which sounds as though, if only the patient could cough a little harder, the mucus would be raised. Particularly in children and in old persons.

Sulphur cures those cases which resolve slowly and which have the following symptoms:

Very red lips.

More thirst than hunger.

Restless nights.

Sleep in cat naps.

Feet burning so that the patient keeps trying to find a cool place for them.

Hepar sulph. cures cases with croupy cough having a loose edge: cases that are chilly and sweaty and with a craving for acid drinks.

Ipecac cures cases having hemorrhages from anywhere of bright blood, associated with nausea.

Capsicum helps cases that have had aspirin or other depressants and have become mentally and physically cold and depressed and blue, with

burning throat, craving for cold water which causes chilliness when swallowed.

Camphor will save some desperate cases in which there is extreme prostration; profuse sweat, alternately hot and cold; and in these cases the patient, when feeling too hot, wishes to be covered up, and, when feeling too cold, wants to uncover.

Iodine cures some of the desperate cases, especially where the lung remains solid, with high fever, much thirst, somnolence and hectic flush.

These remedies cover the majority of cases and will surely cure if given early enough. All cases, as soon as stricken, must go to bed. No aspirin, sweating, cathartics, quinine, Dover's powders or other drugs should be employed, for all that they do is to change the symptoms and mask the case, without being curative. Instead, have the patient drink plenty of water, eat only if hungry and then nothing except fruit, milk, and cereals, and stay in bed until all danger of relapse is past. Observe all the symptoms and select the nearest similar remedy.

POTENTIZATION.—Potentization of remedies at which so many men balk is nothing more or less than predigesting the remedy so that the system can utilize it. We have found that potentization breaks up the cohesion of matter in its tendency. When a remedy has been so treated that it does not act in mass or under the power of cohesion, we get what may be known as the spirit of the remedy or what the ancients call the arcanum. It is nothing more or less than the action of the atomic and ionic elements in their free state. You say that the patient needs iron. Give him three grains, three times per day so that it will do him some good. Each blood cell contains about one billionth of a grain of iron. Something must do some work before your three grains will be made available for use. It must be reduced hundreds of times before the cell will take it up. If we give the sixth centesimal dynamization, we will have reduced the iron to the possible place where it will be taken up by the cell without predigesting. The system will utilize such amounts at once. The only other consideration is to really know that the system is calling for iron.

DR. S. W. LEHMAN, (Dixon, Ill.).

PERITONITIS IN CHILDREN.—Rivarola (Buenos Aires) reports a case of peritonitis in an eight-year-old girl. She had had a gonorrheal vulvovaginitis. At the operation, the abdominal cavity was found invaded by sero-fibrinous pus, in which gonococci were demonstrated. The author thinks the infection travelled by the genital route, and believes that many cases of peritonitis in children of from four to twelve years of age are of gonorrheal origin which is not detected owing to the absence of a minute examination. Gonorrheal vulvovaginitis is common within these ages.—*Abstr. International Abstr. Surgery, Surg. Gyn. and Obs.*, Vol. xxvii, 384.



Wm. B. Vanehennep

THE HAHNEMANNIAN MONTHLY.

DECEMBER, 1918

In Memoriam

WILLIAM BIRD VAN LENNEP, M.D.

Born December 5, 1853.

Died January 9, 1919.

"Think not the beautiful doings of thy soul
Shall perish unremembered.
They abide with thee forever and the good thou didst so nobly,
Truth and love approve."

"He was my friend, faithful and dear to me,"—simple words and few, but to those who learned their full significance by association with Dr. William Bird Van Lennep they have a meaning so deep that it is impossible to add to them, nor would he have desired any greater eulogy from those who admired and esteemed him. Dr. Van Lennep was a skillful surgeon, a brilliant teacher, and a profound scholar, but above and beyond all this he was a great and noble man. The essential facts regarding his career and his character have been ably and lovingly portrayed by his friends and colleagues in the eloquent addresses delivered at the Memorial Services held in the Amphitheatre of the Hahnemann Hospital where Dr. Van Lennep for so many years carried on his life's work. A few statements, however, regarding his final passage to "that

Owing to the preparation of the index for the year the publication of the December issue of THE HAHNEMANNIAN MONTHLY was delayed. Before the issue was out Dr. Van Lennep's death occurred, and the account of his death is, therefore, published in the December issue.

undiscovered country from whose bourn no traveler returns" will be of interest to his many friends and colleagues to whom his memory is a sacred inspiration.

For some months past, Dr. Van Lennep's health had been impaired as the result of a gradual cardiovascular degeneration. About six weeks before his death symptoms of a more serious character developed and his ever keen judgment caused him to realize that his days of useful activity were over. Those who knew him well can readily appreciate what the recognition of this fact meant to him, and yet he bore his physical ills and his mental grief with a patience and fortitude that more than ever revealed the true greatness of his soul. Fortunately he was not confined to his bed but was able to be about and even to take short walks up to the day of his death.

On that fatal day, I had called to see him shortly after 1 o'clock, and, in company with his faithful friend, Dr. Frederick W. Smith, whose constant care and attention contributed so much to his comfort during his illness, was conversing with him in regard to the treatment of his condition.

I can picture him now as he sat in the old arm chair in his "den" where he spent so many happy hours of his life. Suddenly, in the very midst of his conversation, a pallor came over his face, his arms relaxed, his head fell backward, and our beloved friend and teacher was no more. With hearts broken because of our loss, we deem it a cruel blow, and yet he died as he would have wished, without suffering, in the home that he loved so well, surrounded by his wife and his friends. A few days later he was laid to rest and as I gazed for the last time upon the face of him who was to me, as he was to many others, almost a second father, I seemed to hear him speak in the immortal words of Oliver Wendell Holmes:

"Build thee more stately mansions, oh, my soul,
As the swift seasons roll!
Leave thy low-vaulted past,
Let each new temple, nobler than the last,
Shut thee from heaven with a dome more vast,
'Till thou at length art free,
Leaving thine outgrown shell by life's unresting sea!"

G. HARLAN WELLS, M.D.

MEMORIAL SERVICES.

HELD IN THE

CLINICAL AMPHITHEATRE OF THE HAHNEMANN
HOSPITAL, PHILADELPHIA.

January 15, 1919.

REV. FLOYD W. TOMKINS opened the exercises with the reading of the 130th and the 131st Psalms, followed with prayer.

OPENING ADDRESS.

BY

REVEREND FLOYD W. TOMKINS.

I have been called the Chaplain of Hahnemann College, and Dr. Van Lennep was one of my parishioners as well as his family and he has been very close and dear to me through my personal relations with him and with his family. I baptised and married his daughter, and I baptised his grandchildren, and, therefore, relations between Dr. Van Lennep and myself have been very close, so when Dr. Pearson asked me to be present and to officiate on this occasion I could not for a moment but feel it my privilege to come here and I am glad to be here with you. To speak on an occasion such as this, it is not so much the bringing of his professional qualities to your mind as it is the considering of the real life of Dr. Van Lennep, of the individual as we knew him and as it is to testify to the spirit embodied in that life. There is not so much in detail as in the spirit of those of you who are of the Alumni well know, and those in the College Course, the professors and trustees and some of the students perhaps, as well, know how big his spirit of Dr. Van Lennep was, and how Dr. Van Lennep always thrust his whole life into his work. There was a purpose which seemed to take him into the life of this institution and it was that perhaps which took him away, to use an old time term, in an untimely fashion. How he worked and when he worked his virtue went out with him in what he did. It was not only in the strength of his service as a surgeon but in the power of his personality.

I don't think anybody ever shook hands with Dr. Van Lennep without feeling the bigness of his heart; no one came

into his presence without feeling that his genial greeting was not only very sincere but very hearty. I love to think of that spirit in his work. He had such wonderful faith not only in himself but in what he did, and he did have a real faith in what he did. There was no pride in his victories in surgery, but it was faith, the great faith, that he had in his capacities as a surgeon. I doubt whether he ever attempted an operation without realizing that it was going to be a successful operation providing there was nothing hidden which would afterwards appear, and that same hopefulness might also be called optimism which was with him all his life, a hopefulness that we must all remember, those of us who knew him, although probably during the last month or two there was less optimism yet no pessimism but rather a gloom, as he was not well during these last few weeks, but that was not his normal condition. There was that hopefulness, that pride in the practice of medicine which we delight in, his work in surgery and his delight in it, which was all a controlling part of his life. His life was an example that young men going out may well emulate.

There is one thing I want to speak of in addition to what I have already said and that is his love for his home, which cannot but set an example to any of you young men who are going out into a busy life. He loved his home. Although he was so tremendously busy he loved to be at home as much as possible. There was something infinitely pathetic in the fact that after the consultation on the morning of the day in which he died he went into his room, sat down in the chair, his own chair, in his own room, and simply passed away, fell asleep, in the association and surroundings of his home life, with the influence of home, with the loved ones there. May God grant we may have many more such men; we have, I believe, many more in this city with great wisdom and strength who are in the medical profession and may their number increase.

I have the pleasure of introducing to you one of the Board of Trustees, Mr. John Gribbel, who will speak to you from his personal knowledge of Dr. Van Lennepe.

ADDRESS.

BY MR. JOHN GRIBBEL.

It is very fitting that we who still throng the market places and other walks of life turn aside for an hour into this quiet place to record our sense of obligation to him, who here dedi-

cated himself to the help of his fellowmen. Here, at this hour, for many years on many days did our friend without ostentation, pour out of the wealth of his experience, instruction and advice that the young physicians who were to follow him might exceed him in the service of mankind. In all of this there was no self-seeking. Personal ambition had no part in his endeavor. He forgot no man's advancement in worth and place but his own. The advancement of his profession in the service of mankind left no room in his thinking for the sordid things of life. Above all things else in his plan of living there was a constant desire that he might minister to his kind. This was his enthusiasm. How fitting is the etymology of that word to the life work of William B. Van Lennep. You remember it is of Greek derivation, "E, thusio," meaning literally a "God within," and this single-eyed devotion led him out into a very wide field of service.

It is beyond my small capacity to speak of Dr. Van Lennep, the physician, (I leave that to learned and competent lips), but with all due deference in this atmosphere of scholarship and science, I come to speak of a greater thing than a great physician and surgeon. I come to speak of William B. Van Lennep—the man. Of all the degrees that came to him, as the fruit of his industry, devotion and ability, at the hands of gowned representatives of medical universities, none shines so bright even in this hallowed place as the degree of FRIEND, tried and true, which was conferred upon him in the quiet highways of life, where in loving helpfulness and endeavor he made life more lovable for many of us.

Not spectacular this, nor commanding public attention, nor applause, but as a direct result of it in the days to come many men and women will make other lives more cheerful because the inspiration and magnetism of William B. Van Lennep is to be a lasting impulse in the lives of his friends.

"Kind hearts are still more than coronets,
And simple faith than Norman blood."

And so we gather to-day to set up a torch of memory to burn with the constancy of the vestal fire of old. Here in this atmosphere it will guide coming ranks of students in his profession to lasting emulation of the honored career of him we were so blessed as to call friend. From this torch shall tapers be lighted that guide his disciples in the walks of service of man and on through the years shall men thank God that such a man as William B. Van Lennep lived and worked among us. Here on behalf of the Trustees I lay this tribute before you.

Since we laid away the casket that had been inhabited by the soul of our friend and set then those flowers over the grave that so fitly set forth the garlands of his memory, there comes over and over to me an incident that occurred in a Tennessee town about twenty-five years ago—and I have the vision before me now as I face you. It was a little town of about two thousand inhabitants, mostly working people who enjoyed little of this world's goods.

Into that town one day there came a physician. No one knew of his ancestry; he left no posterity. He was simple and modest and plain and unassuming to a remarkable degree, and yet year after year that simple, unassuming man worked in that community and became part and parcel of the life of those poor people. He was physician, surgeon, friend and companion to those people. He lived and had his office in the second story of a little frame shack and had a small sign nailed up in front of the building. The ground floor had been occupied some years before as a little country store, but the business had been unprofitable, and the man who was looking for profit had moved out, but the man, the physician, who was not looking for profit, lived on in the attic. One day the doctor was missed and the second day someone said, "Has anybody seen the doctor?" Nobody had seen the doctor.

The third day a self-constituted committee of three workmen went up to that room to look for him. They went up the rickety stairs and opened the doorway at the head of the stairs and went into what was the doctor's workroom; he was not there. Then they crossed the hall, went through another door, and there was the little room in which he slept, hurriedly at times, and sitting in a chair before a plain table with his account book open before him, with the ink stand open and the pen lying on the table, where it had fallen from his hand, facing the table, collapsed in the chair was all that was left of the doctor.

This self-constituted committee immediately spread the news among their friends, and a funeral was arranged for and they carried the body from the house to the chapel and from the chapel to the cemetery. They carried it because there was not money enough to hire horses, and they laid the doctor to rest. One of the workmen helped to heap the sand over the coffin, and when that was completed, while they were viewing their work, the former village drunkard who had been reformed through the efforts of the physician, said it was not right to leave him there without a monument. They looked blankly at one another. The flowers that covered his grave

were those that had been picked in the fields, and to raise money in that community to buy a monument was a poser. Then the modest man in the committee, whose heart was breaking, and who hadn't said anything, remarked, "Let us go down to the doctor's office and take down his old sign and place it over his grave as a monument." The committee then went to the weather-beaten old shack and proceeded up the rickety old stairway and went through the doorway that led to the front room and there from the outside of that weather-beaten old front of the shack they took the sign. It was an old shingle which the doctor had made and painted himself and nailed there years before. They carefully pulled and lifted that old shingle sign from that weather-beaten old front and then got a post and carried them to the grave at the cemetery. They put the post at the head of the grave and carefully nailed the doctor's sign against that post. There, today, in the cemetery of that little hamlet in Tennessee, away from the stirring scenes of life is the monument on the grave of that physician, the doctor's old sign on that post, and it reads:

"DOCTOR RILEY, OFFICE UPSTAIRS."

DR. TOMKINS: The reputation of Dr. John B. Deaver is not confined to Philadelphia. His skill as a surgeon is known beyond the confines of Philadelphia. He is a man who has known and recognized Dr. Van Lennep for many years and it seems fitting and very kind and lovely of him to be with us today to contribute and to do honor to the memory of our friend.

He may not only be called the leading surgeon of Philadelphia but almost of the country. I take great pleasure in introducing to you Dr. John B. Deaver.

ADDRESS.

BY DR. JOHN B. DEAVER.

"For some we loved, the loveliest and best,
That from his vintage rolling Time has prest,
Have drunk their cup a round or two before,
And one by one crept silently to rest."

As we gather here to-day to do honor to one who has silently crept to rest, how unlike is this meeting to the usual weekly session at this hour within these now hallowed walls! Then eager youths, and mature men also, were glad to assemble here and listen to the forceful teaching of a thoughtful,

subtle mind and watch the master hand deal with the ills of that most perplexing creature of Providence—the human body.

To-day loving friends, associates and colleagues have interrupted their daily tasks and have met here to pay tribute to one “whose praise shall still find room even in the eye of all posterity.”

For the light of William Bird Van Lennep can never be effaced from the memory of those whose privilege it was to feel the effulgent rays of that light whether in personal, social or professional intercourse.

Dr. Van Lennep's passing creates a void in the medical profession, which cannot easily be filled. To me and many others it is a distinct personal loss. The world at large has been deprived of that rare combination of scholar, gentleman, loyal friend, a man whose integrity was never questioned, whose sincerity was never doubted.

Providence was kind to Dr. Van Lennep. Descended from distinguished ancestors his immediate inheritance from his father, a missionary in Turkey, was that sense of being his brother's keeper, the desire for service to humanity. The father chose to exercise his impulse in one way, the son in another, and neither ever swerved from his noble aim. Young Van Lennep, upon his graduation from Hahnemann College spent two years in foreign study under such illustrious men as Bilroth, Albert, Maydi, Dittel, Pean, Lister.

His professional heritage thus was as rich as the spiritual patrimony bequeathed to him from his parents. Upon his return to this country what was more natural than that he should once again seek his home, his alma mater, there through many years of untiring service to forge that chain which will connect his name for all time with that of Hahnemann whom he held in such high esteem. I have said that Nature was kind to our friend. This is indeed so, for in addition to his numerous excellent qualities he was endowed with an infinite capacity for work, which he applied in an unfaltering devotion to the upbuilding of the art of surgery and the development of his alma mater which he cherished as does a loving son his mother. I believe I voice the sentiments of his colleagues in the faculty when I say that it is largely due to Van Lennep's broad vision, his unceasing energy and unflagging zeal that the College stands to-day at the head of the Schools of Homœopathy in this country.

From the year 1886 until the end of his life Dr. Van Lennep served the College. From 1886-1890 he was lecturer on General Pathology and Morbid Anatomy, later becoming

successively lecturer on Surgical Pathology, and on Surgery, Assistant Professor and Professor of Surgery, and during four years of that time, from 1910-1914 holding the arduous and responsible position of Dean of the College. But the record of his life so well and so nobly spent does not end within the confines of this room in the work of which his heart was so wrapped up, nor within the walls of this College. Other institutions claimed the honor and the privilege of benefitting by his learning, his skill and his experience. The Philadelphia Homœopathic Hospital for Children and the Children's Homœopathic Hospital were proud to have him serve as their surgeon; the Wilmington and Trenton hospitals were proud to have him on their consulting staff.

To that large family, sons of his alma mater, scattered throughout this country and the world, removed from the immediate influence of the spoken word and his genial personality, his message came through THE HAHNEMANNIAN MONTHLY, to which he made such valuable contributions on abdominal surgery, surgery of the urethra, the bladder and the bones and joints.

Not only did he do much toward making men well, but he was a strong believer in keeping them so. *Mens sana in corpora sano* was one of the precepts of his life, and as he did nothing that he did not do well, he also became an authority on the physical training of young men as evidenced by his appointment as advisor to the Princeton Athletic Committee.

His desire to serve the profession at large was manifested in his ready co-operation in founding the American College of Surgeons, where he advocated the same high standards that guided him in all relations of life, nowhere more forcibly illustrated than in his more intimate connection with the County and State Medical Societies of which he was an honored member.

And last but not least, Dr. Van Lennep came to his country's aid when the foe of humanity was threatening to destroy all that right thinking people hold dear. Fortunately he lived to be able to rejoice with all of us in the proud consciousness that many of our sons had helped to conquer the enemy.

I cannot refrain from saying a few words with regard to Dr. Van Lennep as I knew him in the consulting room. It was a rare privilege to be brought up against this clear, forcible thinker. His manner was, indeed, ideal. In giving his reason for or against a certain diagnosis he was concise and to the point, courageous and full of conviction. His conclusions were logical, well drawn, and couched in clear, unmistak-

able language. His opposition was the kind that commanded respect, it was never domineering, but always courteous, graciously and considerately stated.

Words fail me in endeavoring to formulate what Dr. Van Lennep's friendship meant to me, personally. It was generous, true, sincere, full of the sunshine which he spread about him everywhere. "When that man comes into the room," said a sorely afflicted patient on one occasion, "I feel that the sun is shining here." And thus it was with all of us who knew him well. We shall miss the sunshine of his presence, his genial smile, his contagious laughter.

Truly, to those dearest to him the poignant grief of these sad hours must be much assuaged by the knowledge that he was so beloved by his patients, revered by his pupils, honored by the profession and held in close affection and esteem by his friends. Therefore, let us not surround his memory with grief, and from the noble portrait that greets us as we enter these halls let us remove the trappings of woe, and let us inscribe upon it his own words (spoken in reply to the presentation of a testimonial on the occasion of his fiftieth birthday) "Let us be glad, we are glad to have lived and worked together."

DR. TOMKINS: We should not mourn but rather rejoice and thank God for the splendid life which Dr. Van Lennep lived and which is so universally revered. Such testimony as has been contributed by a brother surgeon to-day, it seems to me, raises him to such a height of beneficence and recognition—these words and the statements bring to my mind my own experience with him. I remember shortly after I first met him he came to me one day and said (he always called me "Parson") "How about it, Parson; how about that appendix?" I had heard that he was a great surgeon and wonderfully skilled in that particular operation for appendicitis, which had become very common at about that time, and in his presence referred to it. It is simply an illustration of that cheerfulness and that love of his profession and at the same time his heartiness and friendship which was characteristic of his whole life. Those who were closely associated with him here in Hahnemann felt that even more than those who met him only occasionally.

I take pleasure in calling on Dr. Northrop, who will now address you.

ADDRESS.

BY HERBERT L. NORTHIROP, M.D.

To-day is Wednesday; this is Doctor Van Lennep's clinic day and hour and so it has been for many years. With what pleasure he anticipated it and prepared for it: how essential he thought it (and correctly so) for the instruction of the students. All other professional obligations, operations on private patients and consultations were side-tracked to give the Wednesday afternoon clinic the right of way.

To-day is Wednesday; it is 3 o'clock to the minute; it is time for Doctor Van Lennep's clinic to begin; the first patient has been under ether for several minutes and is ready to be wheeled into the clinical amphitheatre, but Doctor Van Lennep is not here; he has gone—forever. His commanding presence, his surgical mien (for he looked to be a surgeon), his master personality are no more, except as a delightfully attractive and fondly cherished memory. But who can estimate the untold worth and far-reaching effect of his more than thirty years of surgical teaching? What a potent influence his lectures and clinics have had, are still having and will continue to have, in the shaping of many surgical careers. As a teacher of surgery Doctor Van Lennep was unquestionably without a peer. His personal lectures and clinics had a finish and a style which made them classics of their kind and savored strongly of the college-bred man, while the educational welfare of the student was always his uppermost and his foremost thought. Every step and technical detail of an operation were recited before the students, but the salient facts of the case were emphasized and driven home in the student's mind as only Doctor Van Lennep could drive them.

As a medical educator and surgeon Doctor Van Lennep always kept fully abreast of the day—he was always aggressive in matters pertaining to his specialty. As an operator he was adept and dextrous, judiciously conservative and wisely bold—an ensemble of qualities essential to the make-up of the well-balanced master in surgery. It is my opinion that Hahnemann College never had a teacher of surgery who was Doctor Van Lennep's equal—undoubtedly he outclassed all his predecessors, and at the same time I believe it will be many years before another surgeon occupies the chair in this institution whose success as a teacher will be as phenomenal.

Another specialty of Doctor Van Lennep's, scarce known to anyone outside of the old governing faculty, was his ability to arrange and remodel the College roster. To all the other

members this roster was the *bete noir* of their faculty existence, but to Doctor Van Lenep the planning and mapping out of the days and hours for lectures, laboratory work and clinics, so that the convenience of every teacher was justly considered and satisfied—all this tangle and wrangle was easy of solution to Doctor Van Lenep; it was his favorite game of solitaire, and he always won.

As a member of the governing faculty, his judgment and advice were invariably sought on matters of college policy. We all knew that Doctor Van Lenep would not, at any time or under any circumstances, jeopardize the reputation of his dear "Old Hahnemann" by sacrificing our College birthright for a mess of pottage. Hahnemann must be a "class A" college and if the American Medical Association, or the Pennsylvania Licensing Board, or the New York Board of Regents raised the requirements, the standards of "Old Hahnemann" must be raised to correspond, and Doctor Van Lenep, with the rest, always insisted that it be done. Before, during and after his tenure of the deanship, Doctor Van Lenep was a most aggressive factor in establishing and successfully executing every best and modern method of medical teaching. His love for his medical alma mater was intense. Let him have full credit for the unstinted devotion which he manifested toward this College, a devotion which was wonderful, aye, beautiful. It truly seems as if Doctor Van Lenep lived for Hahnemann College and Hospital, inasmuch as his life and talents were consecrated to the interests and welfare of this institution. Hahnemann was his first and only professional love.

As some of the lasting monuments to his indefatigable zeal in keeping Hahnemann in the front rank of medical schools, we must not forget that Doctor Van Lenep was the father of and the sponsor for our admirable subclinic method of teaching, and that it was through his individual efforts that this magnificent clinical amphitheatre was promised, planned and realized.

Twenty-four years ago (I remember the occasion so well) many friends of Dr. A. R. Thomas assembled in Association Hall to honor his memory. Mr. George C. Thomas, a staunch benefactor of Hahnemann College and Hospital, spoke at that memorial service and referred to Doctor Thomas as "our grand old man." To-day Hahnemann mourns the loss of another "grand old man;" to-day we hold another memorial service; to-day we honor the memory and life-work of a man who, were he still in the flesh, would consider it a great honor to be spoken of in the same breath as Amos Russell Thomas, so

profound was Doctor Van Lennep's love and respect for Doctor Thomas. And it is with Amos Russell Thomas and the many other grand heroes who have given so much for the success of Hahnemann College and Hospital, that we proudly associate William Bird Van Lennep, surgeon, teacher, executive, colleague, friend.

DR. TOMKINS: I take pleasure in calling on the President of the Board of Trustees, Mr Charles D. Barney, and we will all be glad to hear from him in bearing testimony to the character of the man he loved.

By MR. CHARLES D. BARNEY, President of the Board of Trustees: You have heard the several addresses to-day and everything that has been said about Dr. Van Lennep in regard to his skill and ability as a surgeon, his character and manly qualities and every word that has been said we here in Hahnemann who knew him so well will re-echo.

There is one phase that has been omitted, and that a department in which we are greatly concerned, the financial end of it. If we will look back on the records of Hahnemann I don't think you will find any one man who has done more for this institution than Dr. Van Lennep. We realize and appreciate what help we have had from Dr. Van Lennep. My thought is that we should take this lesson to our hearts and minds and make a resolution that we will keep it warm in our memories.

DR. TOMKINS: I am certain that this service will live long in the memories of the students present, and perhaps we may feel that the best testimony we can give to the memory of Dr. Van Lennep is in feeling a new inspiration in life. You boys here to-day may well go out and emulate our friend, his character and his work, and all us laymen, not privileged to be physicians, will try to do our part and try to be stronger and better men because of this man who has lived among us. Let us not think of this as a sad service but rather, as I have already said, as a time when we come together to thank God for what our friend was.

Dr. Tomkins closed the service with prayer.

SOME EXTRACTS FROM THE PHILADELPHIA NEWSPAPERS RELATING TO THE LIFE AND CAREER OF DR. VAN LENNEP.**THE DEATH OF DR. WM. B. VAN LENNEP.**

Dr. William B. Van Lennepe, one of the foremost surgeons among homœopathists in the country, died yesterday at his home, 1421 Spruce street. He was 65 years old and had been ill for two months.

He was former dean of Hahnemann Medical College and head of the Department of Surgery there. He was one of the advising surgeons of The North American Children's Sanitarium at Ventnor.

Among his associates he was regarded as the dean of his profession, and on the occasion of his fiftieth birthday he was given a dinner and presented a loving cup. His portrait was presented to Hahnemann College at the 1916 commencement.

He was born at Constantinople, Turkey, where his father, the Rev. Dr. H. J. Van Lennepe, was stationed as a missionary. He was graduated from Princeton in 1876 and from Hahnemann in 1880.

Later Doctor Van Lennepe served in the hospital on Ward's Island, N. Y., and studied surgery in London, Vienna and Paris. He became connected with Hahnemann Hospital in 1884, and served as dean of the college for several years, senior surgeon at the hospital and professor of surgery at the college.

He served both as a vice-president and a director of the Union League, as a member of the graduate advisory board of Princeton, and was a member of the American Institute of Homœopathy, the Philadelphia County Medical Society, the Hahnemann Club, the State Medical Society and other organizations.

Doctor Van Lennepe is survived by a widow and a daughter, Mrs. John D. Eliot, of this city. Mrs. Van Lennepe was Clara R. Hart, daughter of Thomas Hart, and they were married in 1886.—*The North American*, January 10, 1919.

DR. VAN LENNEP BURIED.

Members of the Orpheus Club of Philadelphia sang at the service. Prominent doctors and surgeons and members of the various Masonic lodges of which he was a member attended. Dr. Van Lennepe is survived by a widow and a daughter, wife of Major John D. Eliot, now serving in France.

The honorary pall-bearers were Dr. H. L. Northrop, Dr. W. A. Pearson, Dr. W. W. Van Baun, Dr. M. D. Youngman, Atlantic City; Dr. John B. Deaver, Dr. H. S. Weaver, Dr. D. N. McQuillen, Dr. C. S. Raue, Dr. Duncan Campbell, Dr. H. M. Eberhard, Dr. A. B. Webster, Dr. C. B. Smith, Dr. S. W. Smith, Dr. G. Harlan Wells, former Governor Edwin S. Stuart, Judge George B. Orlady, Ernest L. Tustin, Rodman Wanamaker, E. L. Anderson, John H. Carr, Charles G. Davis, Alexander Van Rensselaer, George W. Elkins, W. E. Hering, Charles D. Barney, John Gribbel, Dr. Wm. C. Hunsicker.

Dr. Van Lennep was born in Constantinople, Turkey, where his father was engaged in missionary work, in 1853. For several years he was dean of Hahnemann Medical College, resigning in 1914 to devote himself to research work. He was a founder of the American College of Surgeons and for thirty-seven years served as chief surgeon of Hahnemann College. He was a member of the Union League.—*Evening Bulletin*, January 13, 1919.

A TRIBUTE TO DR. VAN LENNEP.

In the passing of Dr. William B. Van Lennep, a man of ability in his profession and of character among men will be missed both in his pursuits as a practitioner and in his social comradeship. Born in Turkey when his father was there as an American religious missionary, he lived the greater part of his mature life in Philadelphia, rose to eminence in the homœopathic practice of medicine and in surgery, and became identified with almost every important movement by which the Hahnemann College and Hahnemann Hospital have been distinguished in the healing art during the past thirty years. Of a massive, robust physical presence, he was an imposing figure in his comings and goings; he was also the soul of manly geniality, and the services which he performed for the humble as a physician were often undertaken in the spirit of unobtrusive but generous aid. He was well read in the literature of his profession; he mingled the thought of a wide-awake modern student with a soundly conservative disposition, and he was wholly free of that sort of pedantic affectation or ostentation in his writing and his addresses which too often is to be found in the discourse of such members of his profession as are more concerned in winning applause than in producing results. He was pre-eminently a straightforward thinker in whatever he undertook, a citizen of the healthiest and heartiest type of American patriotism, a friend unfailing, and one of the most delightful of those choice spirits whom old Dr. John-

son described as "clubable" men. What he did in and for the school of medicine in which he practiced deserves special commemoration, and the followers of homœopathy in Philadelphia will doubtless record it in no uncertain terms. — PENN.—*Evening Bulletin*, January 14, 1919.

HONOR DR. VAN LENNEP.

Resolutions of respect for Dr. William B. Van Lennepe, the surgeon whose funeral was held yesterday, have been adopted by the Board of Trustees of Hahnemann College and Hospital.

Dr. Van Lennepe was professor of surgery at Hahnemann. The resolutions, in part, follow:

"That we place on record our deep sense of loss in his removal from us, and our high appreciation of his noble character and excellent example. As a Trustee of Hahnemann College and Hospital, as Chief Surgeon, as Dean of the College, and as a teacher he was always faithful and devoted. He regarded his office as a sacred trust and fulfilled his many and varied duties conscientiously. He was always generous and aggressive and sought to advance the interest of the institution by his liberal support and great influence. He not only did a world of good himself but acted as an inspiration to many others. We shall miss his ardent zeal, wise counsel and hearty co-operation in our Hospital and College as well as the inspiration of his presence."—*The Evening Bulletin*, January 15, 1919.

RESULTS OF BLOOD TRANSFUSION.—Rieux (*Paris Medical*), reviews the subject of blood transfusion, as illuminated through general discussion at the recent Fourth Interallied Surgical Conference. He takes up first the rules for choosing donors, then the indications for transfusion, and later the various methods employed. The artery to vein method may now be considered obsolete. Transfusion of pure blood from a receptacle coated with paraffin, of citrated blood, or of preserved blood method being simplest of all, though not as yet definitely established. Transfusions in rather large series of cases yielded 71.8 per cent. of recoveries in cases of hemorrhage or of hemorrhage with shock; twenty-seven per cent. in cases of pure shock, and 44.4 per cent. in cases of infection. Results from the three methods referred to—pure blood, citrated blood, and preserved blood—have seemed practically the same, about three-fourths of all cases of grave hemorrhage being saved. The percentage of recoveries in the entire number of cases of different types under discussion, covering 150 transfusions, was sixty. This result is so gratifying that Tuffier has characterized the lack of attention paid until lately to blood transfusion as one of the gravest therapeutic omissions since the beginning of the war.

**Transactions of the Homoeopathic Medical Society
of the State of Pennsylvania.**

FIFTY-FIFTH ANNUAL SESSION

Pittsburgh, September, 1918

GASTRITIS OF THE CHRONIC TYPE.

BY

R. W. M'CLELLAND, M.D., PITTSBURGH, PA.

IN the whole domain of medicine, there is no subject presenting a stronger appeal to our careful study and consideration than those manifold ills that beset the human stomach, and it is more especially true of that form known as "chronic gastritis." The woeful appearance of the chronic sufferer is a matter of daily experience in the physician's life. Those who have read Kipling's short stories will remember old Doctor Hetherleagh, who had, what he called a sort of fitting up shed for craft damaged by stress of weather. In this classification of human ills he recognized three forms—brain, eye and stomach, and he added impressively—the greatest of these is stomach.

That this subject does not receive the attention it deserves is shown by the fact that it rarely appears as a theme for deliberation in our National and State societies, or in contributions to the medical press. In this, I speak advisedly, having been at no little pains to investigate.

For this reason, and because of its universal prevalence, it seemed a fitting subject for discussion at this time; not forgetting that we are at present involved in the throes of a World War; for so great an authority as Napoleon laid down the dictum, that an army travels on its stomach. This subject may not possess the spectacular appeal of the surgeon's blade, but it will add just as many laurels to the brow of the man who attains success in the treatment of this distressing malady.

And first, we must take into account the difficulties in approaching this subject, for it will be realized that whatever part of the body disease may attack, and in whatever way, the

stomach is sure to suffer, and it is of great importance to determine whether the gastric disturbance is primary or secondary.

To remove the cause, it may be necessary to treat a neighboring organ or organs, or a distant part, or to remove the psychic factor if present.

While all the symptoms may point to the stomach as the offending member, the disease may originate in either outlet, the duodenum, colon, gall bladder or pancreas. An attempt will be made to illustrate this difficulty, in a case to be cited and treated in collaboration with Dr. G. Harlan Wells, of Philadelphia. A given case may have disease of any or all of the abdominal organs, whose only symptoms are referred to the stomach.

Hence, we are confronted with the problem of determining, first, the location; second, the type, and third, the stage to which a given type has advanced, in order that correct treatment may be administered. Again, it may be necessary to differentiate between gastric ulcer, carcinoma and certain neuroses. To elaborate each subdivision of this large subject would require much more space than could be given in this brief outline study. Questions of motility, dilatation and glandular integrity or efficiency will require solution.

As regards dilatation, it is well to bear in mind that the normal stomach varies greatly in size; it may be large or small, or even prolapsed to a greater or less degree. Man achieved a considerable advance over his animal ancestors when he attained the erect posture, but among other penalties which he has had to pay, is a liability to a badly prolapsed stomach. The size of the stomach does not necessarily determine its motility. The stomach which cannot empty itself in twenty-four hours is, of course, a muscularly weak or myoasthenic stomach. But this is not the only cause of food retention, which may also be a result of glandular insufficiency, with its train of evils.

In treating the chronic form, which means the pathologic stomach, and not the ordinary long standing case of dyspepsia, it is usual to recognize, first, the simple chronic form with enlarged, mildly congested and infiltrated stomach. In all the forms we must have recourse to laboratory methods, in addition to the ordinary means of inspection, palpation, illumination, X-ray, and, most important, the case history and symptomatology.

The advanced chronic type follows the unimproved simple chronic, with more serious pathological changes, generally a hypertrophic state, with more infiltration, connective tissue changes and thickening of the walls. The atrophic ushers in the closing scene, with wasted functionless glands, absence of gastric secretion, tissue changes and thinning walls. The symptomatology of these types and the various other types is a matter of common knowledge, and should be carefully considered in each case.

The importance of symptomatology and case history cannot be over-estimated, especially to us as homœopathic practitioners.

On this point, Van Valzah says: "The functional signs make clear the actual work done by the stomach, and form the basis of treatment. Notwithstanding the increase of knowledge, notwithstanding the great precision of modern diagnostic methods, the clinical history still maintains its old utility. The diagnostic value of the subjective symptoms has only been enhanced by our more exact knowledge of their genesis and evolution."

The brief outlines presented in this paper have been intended to serve as an introduction to the following case in which the above conditions seemed to be involved:

(The history of a case in point was then presented, which served to illustrate the progress of the disease over a number of years, from the simple, through various types of chronic gastritis, to a favorable termination).

CARBOLIC ACID.

BY

C. SPENCER KINNEY, M.D.

WE are all familiar with carbolic acid, or, as it is properly called, phenol or phenic acid. It belongs to a class of compounds called phenols, and it has been a mooted question whether it was a true acid or an alcohol, and this I believe has not as yet been authoritatively settled. Its acid properties are feeble, while its chemical structures are allied to the alcohols. It is soluble in one to twenty parts of water, and readily dissolved in alcohol, ether or glycerine. It forms

white or colorless crystals when pure, but is impure when of a brownish tinge.

Medically it has long been appreciated as a valuable remedy for use internally, as well as a disinfectant and antiseptic in arresting putrefactive changes, and for preventing fermentation arising from septic origin. Wherever there is an offensive discharge from a mucus surface, a 2 per cent. solution of carbolic acid may be safely used. Some physicians prefer a 5 per cent. solution, but this must be used with the utmost caution because of the susceptibility of some patients to the drug.

There is hardly any skin disease which may not be benefited by this remedy sometime during treatment, either taken internally or used externally. Where a patient is inclined to stoutness, I have noted that a watery solution of the phenol acts better than oils or cerates, and conversely, where the patient is anemic carbolated vaselines and oils produce better results.

It is a singular fact that it is neutral to test paper. Another point which I have found not generally known to the profession, is that the best antidote for carbolic acid is cider vinegar used pure or in strong solution. Where this cannot be obtained and acetic acid can, the latter may be used diluted with good results. I first learned of vinegar as an antidote to carbolic acid through the late Dr. Edmund Carleton, of New York City, and I have since had occasion to use it in several serious emergencies, and each time with success.

The efficacy of carbolic acid as a medicine first came to my attention in 1876 in what was then the Homœopathic Hospital on Ward's Island. The subject was a young physician who volunteered to stitch up a body post mortem. He accidentally pricked one of the fingers of his left hand, but did nothing for it at the time, which was about three o'clock in the afternoon. By six in the evening he had developed a severe headache, accompanied by prostration. Before morning he was delirious, temperature exalted, and the usual symptoms of blood-poisoning. Dr. William Tod Helmuth had charge of the case and at once prescribed carbolic acid 2x every two hours. For six weeks he was under constant attention of the nurses with frequent visitations from members of the staff. Recovery was slow, and patient was very emaciated and of

impaired strength in left arm, but he *did* recover, and two years later had regained his usual health.

The internal use of carbolic acid is indicated by the symptoms arising from toxemic conditions. In the medical sphere, there is an entire disinclination to mental work. When it is attempted, fatigue follows out of all proportion to the effort made. Patient shows indifference, irritability, wants to be let alone—complains of frontal headache as if a tight band around forehead, and of dull pain running from forehead to occiput. Dr. Mitchell claimed that a very great sense of weight on the neck with aggravation to the point of tenderness of the seventh cervical vertebrae was the prominent symptom. Also there is a constant vertigo not relieved by closing the eyes, better when walking fast in the open air, worse on sitting down; constant humming, buzzing sound in the ears without impairment of hearing, confused feeling in head, headaches worse when bending forward; head and face feels hot as if burning, mouth tastes badly, throat sore, worse on right side; gastric symptoms those of fermentation and nausea with burning in stomach; bowels torpid, also diarrhoea from bad drainage. Throat symptoms are quite prominent; catarrhal laryngitis, constant inclination to cough; expectoration of thin whitish mucus; incessant yawning, patient feels languid and sleepy, tendency to sleep heavily; many dreams, difficulty in recalling them; skin symptoms, itching in various parts of body; vesicular eruption over body, itching excessively.

There is hardly a remedy for skin diseases that does not possess carbolic acid in some degree. In the treatment of boils and carbuncles and hemorrhoids it should be remembered as almost a specific in arresting their formation. When a carbuncle has started, equal parts of glycerine and carbolic acid injected from the center to the circumference will stop its development and allow healing in a very short time without loss of strength to the patient or undue annoyance.

During the early seventies crude vaseline was used by many homœopaths for skin difficulties, superficial wounds and ulcers. This was at a time when laudable pus was a noteworthy feature in a wound that was supposed to be in a healthy condition. Calendula as a stimulant to the tissue generally helped the exhibit of pus, lessened the irritation, promoted healing and reduced scarring of the tissue to the minimum.

For the last thirty years I have used successfully a preparation made up in this way:

| | | |
|---|-------------------------------|--------|
| R | Homœopathic tinct. calendula, | 3 i j |
| | Phenol, | gtt xx |
| | Crude vaseline | lb. j |

Mix the vaseline thoroughly with the calendula and phenol. Sig. All dead tissue should be removed before applying the mixture, spread evenly on lint, and the application should be changed once or twice a day, as may be necessary. In my experience I have had no sloughing, and the carbolic acid prevents suppuration. A marked improvement will be noted within forty-eight hours. Caron oil was generally used for burns and is now by some practitioners, but anyone who tries the preparation I have mentioned will not again resort to caron oil. The importance of this remedy used along the lines suggested is my only excuse for mentioning it to-day. From long observation I have found it is too often overlooked.

DISCUSSION ON DR. KINNEY'S PAPER.

DR. A. L. KISTLER, Allentown: I have for a number of years used Dr. Kinney's formula for burns, with the most gratifying results. Not only did it prevent the sloughing, but it seemed to exert a magical influence on the pain as well.

MYELOGENOUS LEUKEMIA.

BY

G. W. HARTMAN, M.D., HARRISBURG, PA.

By leukemia we understand is meant a pathological condition of the blood and blood-forming organs, characterized by an ever-increasing leucocyte count and a malignant hyperplasia of the blood-forming organs. Although in 1845 Virchow and Bennett described the disease, and later again Neumann and Ehrlick, we still are in the dark. The etiology is obscure and the treatment is experimental, but the diagnosis is certain and can be made only by a blood examination. We recognize two main types: The lymphatic and the myelogenous, either acute or chronic. In the lymphatic there is chronic hyperplasia with increased function of lymphoid tissues

throughout the body. The clinical picture closely resembles one of the anemias; general malaise, weakness, pallor, emaciation, digestive disturbance, dyspnoea, cough, headache, defective vision and hearing, and later pressure symptoms from enlarged glands. The physical examination reveals enlarged spleen and liver tenderness, enlarged lymph glands and tenderness over bones.

The blood picture is characteristic, and affords the only means of differential diagnosis. In lymphatic leukemia leucocytosis with small lymphocytes forming 70 to 90 per cent. of leucocytes is the rule. No myelocytes, if found, they are fully matured. The red cells and haemoglobin usually are unchanged, but as disease progresses, there is more or less diminution of both. In myelogenous leukemia extreme leucocytosis with myelocytes predominating, myelocytes are found in all the transitional forms; thus differing from lymphatic leukemia. Marked diminution of red cells and haemoglobin and increase in blood platelets, is the rule. Prognosis is unfavorable. The treatment is only palliative and experimental. Of the drugs, arsenic seems to give the best results in general cases. K. I. and mercury in leutic cases, benzol in increasing doses has given relief and radiotherapy has been a valuable adjunct to the above therapeutics. Operative procedure is still in the experimental age.

H. B. S., male, age 29, railroader, married, no children, family history negative, chancre at age of 20, salvarsan and mixed treatment, articular rheumatism treated with indicated remedies, stroncylate and salcylate. September 27, 1916, during typhoid epidemic, took bed with malaise, headache, diarrhea and step up fever. Examination revealed rose spots, enormously enlarged tender spleen. Splenic dullness extending to umbilicus and five finger breadths below the costal border. Liver dullness two fingers below costal border. Urine, albumin 0.01 per cent, no sugar, diazzo positive. Blood, hemoglobin 70 per cent., red cells 2,500,000, white cells 374,000. Polynuclear 42 per cent., mononuclears 20 per cent., eosinophyles 4 per cent., myelocytes 34 per cent. Typhoid was treated by serum and indicated remedies. No typhoid symptoms at end of third week. Patient very weak and anemic. Examination from day to day revealed splenic dullness steadily increasing until it had entirely obscured resonance in left abdomen and extending five fingers beyond the mid line. Patient

was put on arsenicum and K. I. Blood examination, November 15, 1916, haemoglobin 75 per cent., red cells 2,500,000, white cells 370,000. Mercks benzol with arsenicum was prescribed for six weeks. No decrease in splenic dullness. Patient out of bed and able to walk around house. Blood, haemoglobin 75 per cent., red cells 2,500,000, white cells 264,000. Patient complaining of headache, nausea, vomiting and burning in the oesophagus with taste of benzol. Stopped benzol, nux, phosphorus and K. I. was prescribed for six months. June 18, 1917, splenic dullness slightly increasing, complains of weight in abdomen, headache, weakness in morning. Prescribed abdominal belt with above remedies. Patient able to work in cigar store for half a day every other day. After two years of treatment, blood shows haemoglobin 78 per cent., red cells 2,650,000, white cells 124,000, polynuclear 58 per cent., mononuclears 20 per cent., eosinophiles 2 per cent., myelocytes 20 per cent. Patient fairly comfortable. Splenic dullness increasing.

PNEUMONIC FEVER—A STUDY IN RELATION TO THE WASSERMANN REACTION: ITS APPARENT EFFECT ON PROGNOSIS.

BY

G. MORRIS GOLDEN, M.D., PHILADELPHIA, PA.

THE relation of syphilitic disease and its effect as a causative factor in the chronic diseases is well known, and forms an interesting phase of clinical medicine. How frequently it has been observed, that upon the administration of anti-syphilitic treatment during the course of a chronic disease, marked improvement follows in the condition of the patient, thereby altering the outlook or prognosis in such cases.

In the observation of the acute infectious diseases, notably those of the exanthematous type, double infections are frequently encountered, the secondary infection suppressing the primary condition, and after the secondary infection has run its course, the primary disease becomes manifest and continues its course. The prognosis in such conditions is always guarded and the mortality usually high. With these factors in mind, during the past several years it was noted by myself and my colleagues in service upon the medical wards

of Hahnemann Hospital, also on several occasions in private practice, that in cases of pneumonic fever (lobar pneumonia) although very severe, exhibiting a positive Wassermann reaction in which all the prognostic factors pointed to a fatal termination, recovery followed in a large per cent. of cases.

With this in view a Wassermann reaction was obtained in a number of cases of pneumonic fever, to observe its relation to prognosis and mortality.

Accordingly an examination of 298 cases of pneumonic fever occurring during the last five years was made. There occurred in the 298 cases 88 deaths, with a mortality of 29.5 per cent. This, of course, appears very high, but when the type and physical condition of the average hospital admittant is considered, and that 5 to 6 per cent. die within the first 24 to 48 hours, the mortality is well within range of general statistics.

The object of this paper is to consider from a clinical standpoint, a study of the cases exhibiting a positive Wassermann reaction, and its apparent effect on prognosis and mortality.

In the series there were forty cases, giving a positive Wassermann reaction. These were not picked cases but taken irrespective of conditions. Two-thirds occurred during the past two years, and the remaining one-third during the several years previous to the recognition of the apparent effect of a positive Wassermann upon prognosis. The number of deaths occurring was seven, in the series of forty cases, or 17.5 per cent., as compared to 29.5 per cent. in the whole series of 298 cases. A decrease of 40 per cent. in the mortality rate.

Sex—Males 33, female 7, or about 5 to 1, ordinarily it being about 2 to 1, showing the preponderance of specific infection in the male. As regards color, white 19, black 21. A fact of interest may be noted that of the 7 deaths, 6 were black, and 1 white, evidencing the well known fact of the high mortality rate among the black race, which ordinarily is double that of the white subjects.

Age—Youngest 18, oldest 72, with the following tabulation:

| | |
|----------------|----|
| Under 20 | 1 |
| Under 30 | 13 |
| Under 40 | 11 |
| Under 50 | 8 |

| | |
|------------------------------------|---|
| Under 60 | 6 |
| Over 70 | 1 |
| 40 cases gave a positive reaction. | |

Wassermann Reaction—There were 17 cases that gave a history of syphilis, and being treated for same, in other words over 5 per cent. apparently did not know they were syphilitic, at least said so. A tabulation of the Wassermann reaction is as follows:

| | |
|----------------|------|
| 5 cases | x |
| 20 cases | xx |
| 7 cases | xxx |
| 8 cases | xxxx |

A factor of note to substantiate a syphilitic infection, is that the five cases giving a x reaction, all gave a history of syphilis with treatment, as did ten of the cases of the xx reaction. The other two occurring in the xxx and xxxx classes, respectively. From this I feel we can properly conclude that all of the cases bear sufficient evidence to be specific.

Sputum Examination—Pneumococci—This was not observed in any case in reference to this type of pneumococci. This would be interesting to note in considering the mortality.

Temperature—There was little of significance noted. Of the 40 cases, 14 exhibited a temperature of 104 and over, and 3 cases of 105 or more.

Highest temperature 105.6, which recovered. Hence, 17, or 42.5 per cent., recorded a temperature of 104 or over, with the low mortality rate recorded.

Pulse—This study is instructive. The tabulation follows:

| | |
|-----------------|----|
| Under 90 | 2 |
| Under 100 | 2 |
| Under 110 | 4 |
| Under 120 | 3 |
| Under 130 | 10 |
| Under 140 | 11 |
| Under 150 | 4 |
| Under 160 | 2 |
| Under 170 | 2 |

It will be noted that 29 or approximately 75 per cent., exhibited a pulse rate of 120 or over, and 19, or close to 50

per cent., a pulse of 140 or over, at some period during the course of the disease. Of the 19 cases, with a pulse rate of 140 or over, there were 6 deaths, or 31 per cent.

A pulse rate of 120 is always looked upon as an unfavorable sign, while a pulse rate of 140 or over, is practically always fatal. Mackenzie, I believe, makes the statement that he has never seen a case of pneumonic fever recover that evidenced a pulse rate of 140 or more for 24 hours.

Respirations—The noticeable feature is the large percentage of cases showing a rapid respiration, out of proportion to pulse and temperature.

| | |
|----------------------------|----|
| Respiration under 30 | 1 |
| Respiration under 40 | 9 |
| Respiration under 50 | 9 |
| Respiration under 60 | 14 |
| Respiration under 70 | 4 |
| Respiration under 80 | 3 |

Lowest was 28, highest 78, both recovered. Cases with 50 respirations or over, 21, with 6 deaths; 60 respirations and over, 11 cases, with 5 deaths, or 45 per cent. mortality, and 28.5 per cent. mortality in cases of 50 respiration and over. This is an amazingly low mortality rate, such cases usually exhibiting a death rate of 75 to 80 per cent.

Blood Pressure—This was recorded in 21 cases. In 15, or approximately 75 per cent., it was below the pulse rate in beats per minute. This condition argues for an unfavorable termination in 60 to 70 per cent. Such cases account for 6 deaths, or 40 per cent. I have given the subject considerable attention, and such a mortality under such conditions of blood pressure can be considered markedly below the average.

Leucocytes—There was little to be noted, 57 per cent. were under 20,000. The highest, 54,800, in a patient 72 years of age, died. The lowest, 7,800. It was this case that attracted our attention to the possible effect of a positive Wassermann on the outcome. He was a negro, 24 years of age, pulse 140, respiration 60, blood pressure 120, and a double pneumonia, involving right and left lower lobes and xxx Wassermann reaction. His condition was deplorable, and a positive fatal prognosis given. He made an uneventful, uncomplicated, complete recovery.

Urine—Recorded in 19 cases, 13 showed albumin, from x to xxx. Six cases, albumin and casts.

Anatomical Involvement—As follows:

| | |
|---------------|----------|
| 1 Lobe | 23 cases |
| 2 Lobes | 16 cases |
| 3 Lobes | 1 case. |

It will be observed that 42.5 per cent. involved more than one lobe, or in other words, can be justly considered double pneumonia. Of those involving more than one lobe, there were 4 deaths, or 23.5 per cent., a remarkably low mortality for double pneumonia.

Complications—This was recorded in 21 cases, as follows:

| | |
|--|---|
| Dry Pleurisy | 2 |
| Pleurisy Effusion | 2 |
| Empyema | 1 |
| Tuberculosis | 1 |
| Jaundice | 1 |
| Alcoholic | 4 |
| Delirium Alcohol | 3 |
| Fractured Hip and Alcohol | 1 |
| Diffuse Bronchitis | 2 |
| Transverse Myelitis | 1 |
| Interstitial Nephritis, Dilated Heart... | 1 |
| Pericarditis | 1 |
| Otitis and Mastoiditis | 1 |

Of the fatal cases, all showed apparently some complications, as follows: Jaundice, 1; acute otitis and mastoiditis, 1; pericarditis, 1; alcoholic delirium, 1; interstitial nephritis and dilated heart, 1; fractured hip and alcoholism, 1; lastly, double pneumonia in male 72 years of age with vascular changes.

Summary—From a consideration of the important clinical facts that have a bearing on prognosis as evidenced by this study, viz.:

1. *Race*—The whites and blacks being about equal, with the high mortality of the disease among the negro race.

2. *Temperature*—42.5 per cent. having a temperature of 104 or over.

3. *Pulse*—75 per cent. exhibiting a pulse rate of 120 or

over, and 50 per cent. a rate of 140 and over at some period of the disease.

4. *Respiration*—25 per cent. of cases revealing respiration of 60 or more, and 50 per cent. respiration of 50 or more with mortality of 28.5 per cent. In such a combination of temperature 104 and over, pulse 120 or more, and respiratory rate of 40 or more in 220 of this same series, studied a year ago, the mortality was 57 per cent.

5. *Blood Pressure*—While it was only recorded in about 50 per cent. of the cases, the mortality was only 40 per cent., as compared to 60 or 70 per cent., which normally should be present in such cases.

6. *Anatomical Involvement*.—42.5 per cent. were of the double type, in such type mortality usually is 50 per cent. or more, this series was 23.5 per cent.

7. *Complications*—Over 50 per cent. showed complications with a mortality about 33 per cent. In fact, all of the fatal cases had complications of a most serious type, notably alcoholism, interstitial nephritis, dilated heart, acute mastoiditis and pericarditis as the important ones.

From a survey of this series of forty cases it is evident that 75 per cent. of them were of a severe type, and that a mortality of 17.5 per cent. under such circumstances is an extremely low death rate. I do not advise that syphilis should be contracted as a prophylactic measure against the high mortality of pneumonic fever, as some of my hearers or readers may suggest or ask.

From a consideration of these clinical facts, it is quite evident, or at least suggestive, that a history of syphilis, with the finding of a positive Wassermann reaction, has a favorable effect on the prognosis. At our best the prognosis of pneumonic fever is not an easy matter and oftentimes a mere guess. Any factor that will help us to change this chaotic condition is a benefit to us in formulating a final conclusion in this terrible and fatal disease.

THE REPORT OF TWO CASES OF LARGE DENTIGEROUS CYSTS.**BY****G. W. MACKENZIE, M.D., PHILADELPHIA.**

I AM prompted to report the following two cases because (a) the condition is a comparatively rare one, (b) that in both cases the cysts were large, (c) that they were both typical, one occurring in the upper jaw, the more frequent location, and the other in the lower jaw, which is a rather infrequent location, (d) that one was typical of the infected and the other of the non-infected type, (e) that the results of operation in both cases were equally satisfactory.

I have mentioned that the condition is a comparatively rare one if we are to judge from the dearth of cases reported in the literature from 1912 to 1918. A further evidence of the rarity of the condition is to be noted in the fact that in the cases that I have been called upon to treat, including the two herewith reported, the dentists who handled them, and the X-ray specialists, in spite of their excellent pictures, had failed to recognize the true nature of the condition and invariably made the misdiagnosis of an abscess of the jaw. If dentigerous cysts were a more common condition, they would not be so readily overlooked.

That the cysts were large in both cases is evidenced by X-ray pictures which I herewith submit. Unfortunately, the pictures in the second case, mouth films, made by a dental radiographer, were not large enough to include the entire cyst, not more than half of the cyst being shown.

Case 1—Diagnosis, infected dentigerous cyst of the lower jaw, right side. Miss L. M., age 63 years, was referred by Dr. Howard Ivins, of Trenton, May 13, 1918, at which time the following history was presented:

About five years ago a tooth was extracted from the lower jaw on the right side. Immediately following the patient observed a hard swelling in the region of the extracted tooth. She had never had any pain until about three or four weeks ago, when she noticed an abscess about the gum. The abscess was incised, when it discharged a dark reddish fluid which tasted like blood in her mouth. She had some fear that it might be a cancer. Her appetite had been good until a week ago. She believed that she had lost some weight.

Present Condition—On the lower jaw on the right side externally there was noted a hard swelling not especially tender. On inspecting the gums and alveolar process, the swelling was even more apparent. The width of the alveolar process at the site of the cyst (from the buccal to the oral side) was approximately two-thirds of an inch thick, about three times the normal. This circumscribed swelling was about one inch in its antero-posterior dimension and about the same in its vertical. On the upper surface there was an opening



DENTIGEROUS CYST—INDICATED BY ARROWS. CASE I.

large enough to admit a soup bean, the border of which presented a few granulations. Upon entering this opening with a probe, a large cavity was entered, large enough to accommodate a good sized lima bean. The inside of the cavity contained a slight amount of thin, purulent, slightly blood tinged offensive secretion. After removing this discharge, further inspection with the probe revealed a firm, smooth lined cavity that did not tend to bleed. No raw bone was detected with the probe. With the probe inside the cavity and the finger outside, the cyst wall was observed to be very thin. The

bulging of the cyst was more toward the buccal than the oral side.

The diagnosis of dentigerous cyst was made and the patient referred to the X-ray specialist for further examination. The picture he made was very excellent and showed the cyst very distinctly, in spite of which his report reads as follows:

"I herewith submit report of the Roentgen examination of Miss L. M.'s right inferior mandible and find a large circumscribed necrotic area almost the size of a half dollar about midway between the angle of the jaw and the symphysis menti. It seems to have a fairly distinct surrounding wall and believe the condition to be infectious rather than malignant. Hoping that this may be of benefit to you in the treatment of the case, etc."

On May 17th the patient was operated under ether narcosis. The mucous membrane over the alveolar process was incised along its upper margin in front and behind the opening already present. The periosteum was separated from the underlying bone, after the manner as performed in the mastoid operation, so that the entire bony cyst was exposed. With bone forceps the cyst wall was bitten away piece by piece clear to and including the floor. The muco-periosteum was brought together as in a septum operation. No packing was used.

The following day there was a slight reaction, but no pain. T. P. R. normal. The patient was discharged from the hospital after a few days. The major part of the after-treatment was in the hands of Dr. Ivins. On June 24th the patient was feeling well, the wound was entirely healed, and no signs of return of her former trouble.

Case 2—Diagnosis, non-infected dentigerous cyst of the upper jaw, left side.

Mr. J. L. Age, 39 years; reported to me first on August 1, 1918, with the following history:

He has had a troublesome swelling in the upper jaw on the left side for the last four or five months, which was diagnosed an abscess by one of his physicians. Believing it to be an abscess, he had a tooth extracted, which was followed immediately by a discharge which the patient believed to be pus. Aside from an occasional discharge, the swelling gave the patient no discomfort.

On June 13th he was radiographed by Dr. James A. Fisher, of Asbury Park, whose film is herewith submitted. Dr. Fisher's diagnosis was that of a large abscess. His letter to the patient, under date of June 13th, was as follows:

"I am sending to you enclosed the X-ray films of your left upper jaw. It shows a large abscess at the point indicated by the arrow on the films. This must be opened up and full drainage established and treatment given in order to keep from further necrosis of the bone. You better show this letter, together with films, to Dr. Fairbanks (family physician)."

Present Condition—Inspection of the face externally showed a very slight amount of swelling in the region of the cheek corresponding to the location of the cyst. The skin was in no way discolored. Inspection of the mouth by palpation showed a large rounded ($1\frac{1}{4}$ inches diameter) hard swelling in the region of the canine fossa and somewhat posteriorly, which did not crepitate under finger pressure. In the region of the hard palate nothing was noticeable. A tiny opening in the alveolar process, corresponding to the location of the second bicuspid tooth, admitted with slight difficulty the smallest malleable blunt probe. The cavity was found to contain but a slight amount (6 to 8 drops) thin, clear, slightly viscid, odorless secretion. Indirect palpation with the probe revealed a somewhat rounded, firm, walled cavity about the size of a pigeon egg. This cavity seemed to replace in large part the maxillary sinus. Lavage of the maxillary sinus after the usual method with the Litchwich puncture needle gave a negative washing, while none of the water escaped through the opening of the cyst in the alveolar process, nor did the direct washing of the cyst under pressure permit water to escape into the nose, from which I concluded that the cyst wall was intact; furthermore, that the sinus proper was in normal condition.

The patient was operated at Ann May Hospital, of Spring Lake, N. J., on August 4th, under ether narcosis. An incision was made along the margin of the alveolar process from the canine tooth to the first molar. The muco-periosteum was prepared from the underlying bone on the buccal side quite to the lower rim of the orbit and on the palatal side half way to the median line. A No. 10 Alexander chisel was used

to open the cavity through the canine fossa, after which was substituted the biting forceps. The whole of the outer wall of the cyst was thus removed. Posteriorly the cavity was found to extend a half inch beyond the first molar tooth, when it was considered advisable to remove the obstructing tooth to permit of complete removal of the external wall. The cavity was found to be considerably larger than was indicated by the radiographic film. The membranous lining of the median wall of the cavity was curetted away. At no place could a break through the wall be seen, which corroborated my earlier opinion of a distinct cavity in no way communicating with the **maxillary sinus**.

The case corresponds to a specimen I have in my collection, the photograph of which is herewith submitted, with the exception that in the case operated the cyst was considerably larger than in the specimen.

The patient made an uneventful recovery with the assistance of his family physician, Dr. Warren Fairbanks, of Freehold, N. J.

Concerning the etiology of dentigerous cysts, there are two theories—one by E. Magitot,¹ and the other by Mallasez.² Magitot contends that dentigerous cysts are of periostitic origin. He claims that every so-called periostitic cyst is produced by swelling of the tissues that go to form the periosteum and the alveolar ligament, and, furthermore, that it occurs invariably at a definite location, the highest point (apex) of the root; to be more exact, at the end of the root canal.

Mallasez, on the other hand, attributes the development of the epithelium (paradental) of the cyst to remnants of the enamel germ. The more recent investigations of G. Scheff's³ corroborates this theory of Mallasez.

According to Zuckerkandl,⁴ speaking for Mallasez and Scheff, there is occasionally to be found at the apex of diseased roots small cystic swellings, into the cavity of which extends the tip of the root free of periosteum. The cyst wall is described as lined with lamellated flat epithelium.

Concerning the development of dentigerous cyst; it has a small beginning but tends to increase in size. It remains sterile until the tooth that communicates with the cyst becomes infected, when the infection extends along the root canal to the cyst proper and, in turn infects it, when we have an infected dentigerous cyst, as in the first case. In the sec-

ond case reported the cyst was not infected and the tooth that had been removed by the dentist was noted at the time as perfectly sound.

Dentigerous cysts are probably not so rare as commonly believed, and should be thought of in all cases of swelling, especially the larger ones occurring about the roots of teeth. The possibility of a dentigerous cyst should be borne in mind, especially by the X-ray specialists, who are frequently called upon by dentists to ray the teeth and alveolar processes.

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A NOTE ON PLEURISY.

BY

O. S. HAINES, M.D., PHILADELPHIA.

A FRAIL looking woman of sixty years, during a sharp attack of influenza, suffered from pain in the lower left chest which interfered with deep inspiration. Her physician diagnosed pleurisy, but decided, upon later examination, that the pleural inflammation had cleared up without effusion. Some three weeks afterward the woman noted considerable dyspnea on exertion and whenever she lay upon her right side. We found a large pleural effusion upon the left side, giving us absent voice transmission and flat percussion note: pretty well up to the inferior angle.

Ten days' use of cantharides 3x alternately with arsenicum 3x: a dose every second hour removed this effusion. This has happened in several of my cases of pleural effusion and, therefore, is perhaps worthy of notice. The treatment of pleurisy, with effusion, by internal medication, is not altogether satisfactory. The following is, however, probably true in a considerable number of these cases: If hyronia fails to relieve the atrocious stabbing pain of the early stage, asclepias tuberosa tincture or 1x. will do so. Should effusion follow,

byronia will probably not influence the fluid accumulation. Cantharide in low potency is more likely to do so. If the latter also fails arsenicum album 3x should be tried. Beyond this, with the possible exception of sulphur, remedies seem to have little effect; and the case should be aspirated. Persistent dyspnea calls for earlier aspiration. It is not good practice to allow such cases to run on for any length of time.

THE VALUE OF MODERN CHEMISTRY.

BY

JOHN G. WURTZ, M.D., PITTSBURGH.

"CHEMISTRY will have the last word," is a statement credited to Pasteur, who, though a pathfinder along the lines of bacteriology and immunology, was a chemist. Just how final the "word" is, no one can say, but that chemistry has invaded medicine, especially during the last five or seven years, no one can deny. The chemistry is that practiced by physiologists and is modern in so much as for the most part it consists of new methods and not improvements upon old.

The chief feature of modern chemistry as used in connection with the clinic, is speed. Many of the older methods of estimating substances in the blood and urine consumed from two to four days and from one hundred milliliters to a liter of material. To-day's methods give the final result in from one-half to two hours, using from one to ten milliliters of blood or urine. The advantages of the shortened time and lessened amounts of material are obvious. The quick results appeal to the clinician and laboratory worker and consequently the amount of work along this line has greatly increased. And too the attitude toward the normal values of blood substances has in many instances changed.

In this modern chemistry many of the estimations are of a microchemical nature, using the colorimeter as a means. This is the case in estimations of nitrogenous substances and sugar. Titration figures, too, to some extent, and with such substances as fats and acetone, the nephelometer.

With the increase of the amount of work done in this line of chemistry the values, both normal and pathological, have changed and vary somewhat according to the method or

modified method used. This disagreement, however, does not enhance the value of the tests because nearly everyone agrees as to the clinical conditions giving increases and decreases of these substances, and the significance of these changes from the arbitrary normal. Like other laboratory procedures these estimations of blood and urine substances are of great value in the diagnosis, prognosis and treatment of many diseases, particularly those of a medical nature.

There is no real treatment for nephritis except hygienic. Medical therapeutics depend upon the symptoms. To tell every person with albuminuria and a high blood pressure to discontinue the use of meat or to go on a milk diet is rather unfair, because the modern chemistry makes possible the adjustment of treatment to the needs of the individual and often exempts one from restrictions which, to say the least, are unnecessary. To depend upon urine analysis alone is misleading because it has long since been pointed out that albuminuria and cylindruria are no indexes of the amount of anatomical or physiological change in the kidneys. Albumin and casts bear a very uncertain relationship to renal disease, hence the newer methods are more than welcome among the many laboratory measures.

For the most part the nitrogenous waste of the body is converted into urea and as such is eliminated. The organism is capable of storing but a certain amount of urea and the excess is excreted. Just how much of the nitrogen is stored and how much rejected is the fact to be determined. This factor is, broadly speaking, the nitrogen equilibrium and is of value since the diseased kidneys do not accommodate themselves to changes in the blood nitrogen as do healthy ones.

After determining the nitrogen equilibrium or the relation of intake to output, the kidney function may be determined by administering urea. Normally the amount usually given is eliminated in thirty-six hours, so any retardation is a guide to the severity of the kidney function. Nitrogen retention is the cause of many of the symptoms of chronic nephritis, from loss of appetite and faulty digestion to coma and convulsions. The degree of this nitrogen retention bears no definite relation to the amount of albumin in the urine, or the occurrence of edema. Severe symptoms are caused by the so-called residual nitrogen which, so far, is but little understood and may include certain unknown toxic substances. In severe cases of

nitrogen retention the residual nitrogen is increased. Residual nitrogen is that nitrogen which remains after the combined nitrogen of urea, uric acid, amino acids, creatin and creatinin are subtracted from the total nitrogen of a nonprotein nature. The sum total of the nitrogen of these substances never equals the amount of total nonprotein nitrogen. However, in severe cases the proportion is greater in favor of the residual nitrogen.

In the study of acute nephritis the renal test meal, the determination of the blood chlorides as compared with their rate of elimination, and the estimation of the rate of urea excretion and the phenolsulphonephthalein tests are of value. Early in acute nephritis the renal function may be normal, due perhaps to the stimulation of the kidneys by the congestion. As the inflammation subsides the renal function falls quite low, to return to normal as the condition improves. This falling of the functional capacity is of good omen, indicating a lessening of the acute congestion.

The chief blood changes in chronic nephritis are in the urea and nonprotein nitrogen, which are increased. The ability of the kidneys to excrete sodium chloride is also of value, as are the phenolsulphonephthalein test and the total nitrogen of the urine. The phenolsulphonephthalein test gives the kidney function at the moment whereas the nonprotein nitrogen of the blood and urea content is a measure of difference between the amount of waste nitrogen produced in metabolism and that eliminated by the kidneys.

In chronic nephritis with hypertension the nonprotein nitrogen is retained. Instead of 16 to 40 milligrams per 100 milliliters of blood it may be 40 to 100 milligrams or more. Normally the urea is 0.15 to 0.5 grams per liter of serum. Where the renal epithelium is damaged there may be found 1 to 3 grams per liter. According to the observations of Widai, patients with 1 to 2 grams of urea per liter rarely live more than a year. With 2 to 3 grams per liter death will usually result in a few weeks or months.

In both chronic and acute renal disease the chlorides are retained. The proportion of chlorides to nitrogen should be 1 to 1, but with marked chloride retention the proportion is greatly disturbed. Here may be mentioned that normally blood urea is 50 per cent. of the total nitrogen, but in chronic

nephritis the urea may be 65 to 80 per cent. according to the severity of the case.

Uremia is almost always accompanied by some increase of the nonprotein nitrogen of the blood, but no constant relation exists between the degree of increase and the tendency to uremia. Uric acid, creatin and creatinin, amino acids and ammonia are increased in this condition. The ammonia probably because of the acidosis which is present, as a rule. The acidosis of uremia is not only a ketosis but a retention of the acids of metabolism. One of the chief kidney functions is the elimination of acid phosphates. In this way the alkali equilibrium of the blood is retained and the urine made acid. When the renal cells are unable to excrete the acid phosphates the blood becomes less alkaline and tends toward an acidosis, which by the way, is not relieved by the administration of soda.

In the study of diabetes chemistry has figured largely and has been of great value. The blood changes in this disease are increase in the glucose and acetone content and also an increase in the blood fats and lipoids which is more marked the severer the condition. Blood sugar normally is 0.06 per milliliter of blood. In diabetes it may rise to 0.4 milligrams and during coma to 1 per cent. Of most value are the tests for acidosis and the best of these are the soda tolerance test and the carbon dioxid tension of the alveolar air. Acidosis is found in several other conditions but not usually so marked as in diabetes.

In health and in most diseases the blood remains practically constantly slightly alkaline. In the body are produced acid substances as a result of metabolism. These acids combine with the base and are carried to the lungs and kidneys for excretion. An excessive production of these acid substances—from faulty metabolism—withdraws base from the body and depletes the bicarbonates from the blood. The administration of alkalis aids quite a bit in the neutralization of these acids because the only base formed in the body to combat excessive production is ammonia.

Signs of acidosis are a lowered carbon dioxid tension of the alveolar air and a diminution of the alkali reserve of the blood. The blood becoming as it does, less alkaline, there is an increased tolerance for soda. Usually the normal individual needs 5 to 15 grams of soda to render the urine alkaline, but should more soda be necessary to bring about this reaction

it suggests a lessened alkalinity of the blood or acidosis. Studies have shown that the carbon dioxid tension of the alveolar air is practically that of the blood. When acid substances are increased in the blood, they are increased at the expense of the carbon dioxid, hence its lowered content.

The mere testing of urine for acetone or the existence of a ketonuria is unreliable because the formation and excretion of acetone are by no means parallel. In acidosis is further found an increase of ammonia as evidence that the body is attempting to neutralize the acid over-production.

Many of the observations in blood chemistry are very interesting in pregnancy. For some unknown reason the blood urea is lower in a normal pregnant woman than it is in the blood of one not pregnant. If the urea nitrogen increases in pregnancy the condition becomes alarming, while on the other hand it may be greatly diminished in eclampsia. In the normal non-pregnant the urea nitrogen is 50 per cent. of the total nonprotein nitrogen, while it is but 20 to 35 per cent. in normal pregnancy. The only other changes in the blood during pregnancy are an increase of the blood sugar and fat.

The quantity of uric acid in the blood has been found to be much greater than was formerly supposed. There is an increase of blood uric acid in gout, probably due to faulty elimination more than to an increase of production. While uric acid is increased in this disease, other nitrogens are not. Uric acid may be increased in many other conditions, none of which are to be confused with gout, except perhaps rheumatic arthritis, and here there is an increase of other nitrogens, unlike in gout.

The blood in febrile diseases shows an acidosis and an increase of acetone and chlorides. The latter is of value in prognosis, because it has been observed that when the urine chlorides fall to 0.05 grams per day it is of grave significance. Urea is excreted to a greater extent in fever due to the increased tissue destruction.

In carcinoma of the stomach is found an acidosis, chloride retention and an increase of blood sugar. It has been found by some that the hyperglycemia is greater in carcinoma affecting the internal organs than in carcinoma affecting the skin and mucous membranes. Sarcoma does not cause this change.

An acidosis may be found in cardio vascular disease due

principally to the cyanosis and should edema be present there is in addition a chloride retention.

Hepatic cirrhosis has associated with it principally an acidosis, increase of ammonia, blood sugar and fats. Tuberculosis causes little change except perhaps a diminution of cholesterol and an acidosis. Primary anemias have, too, the lessened cholesterol value.

Tumors, injuries or hemorrhage affecting the brain are responsible for an increase of blood sugar, while the fats are increased in injuries to the cord.

To summarize it may be said that the newer chemical methods are valuable guides to the clinician, especially in the two greatly studied but not fully understood diseases, nephritis and diabetes. These methods have come to stay and will be further improved, throwing light upon dark subjects. Just as the stethoscope, blood pressure apparatus, blood count, Widal, Wassermann and many other appliances and tests started small and are now commonly used, so I believe, will biological and physiological chemistry develop into a valuable routine and hold a fairly prominent position among our aids to diagnosis, prognosis and treatment.

DISCUSSION ON PAPER OF DR. WURTZ.

DR. CLARENCE BARTLETT, Philadelphia: Accepting the summary of Dr. Wurtz as the text for some remarks, I would say that I feel that we can get down to a common clinical ground in which we are all of us very practically interested. As regards the higher walks of clinical chemistry, it is all so new and marvelous that I do not feel that for several years, as yet, we can adapt them to the practical needs of every-day medical life; but when it comes to diabetes and nephritis, I think that we can get somewhere, even now. Particularly do I regard it as of importance that we do get rid of our old methods of dieting our nephritis cases. As regards the cases of acute nephritis, it is not a matter of so much importance. We can starve these patients and rest them. We are dealing with an inflamed kidney. But when it comes to chronic cases, we have been, in the past, very remiss in the methods that we have used. Without hesitation, we have put patients on exclusive milk diets, forgetting that milk is a strictly protein food. We have forgotten the nutritive needs of the patient, and have starved him; because we have not given him enough food for the day. The modern methods are showing the im-

portance of certain foods, their value in nutrition, the importance of giving the patient the full food-value for nutrition, etc. This has been worked out very well by Chase, of New York; and while time has not enabled us to confirm his observations, I think that he has given us a good working basis for treating nephritics hereafter.

When it comes to diabetes, the average practitioner, in my experience, has been very remiss. There has been altogether too much attention paid to the detail man as the leader of our therapeutics, and not enough to our own individuality. For example, a number of concerns get out diet lists. I have seen them in many cases. A slip is torn out of the book and handed to the patient. One patient had been to three physicians; all of whom advertised the same particular concern. When he got a list to be written out and mailed to him, he made a prayer. That is no joke.

Another thing to be borne in mind is that the diabetic patient must be treated with the same care and attention to daily detail as is the typhoid patient. Let the diabetics come to the office every day and be examined, so that you may see the influence of the diet on them. Avoid routinism. The Allen treatment is an immense advance in the treatment of diabetes; but to make it the whole thing, is wrong. If you assume that it is 100 per cent. right, the principles of V. Noorden are wrong. Allen has simply given us an additional method of treatment.

The subject is a very big one. In fact, I think that Dr. Wurtz, in his most excellent paper, has given us a great many subjects about which we can talk a great deal. With diabetics and nephritics, I think we can say a great deal. A good general principle for the nephritic is that the food be well cooked. Do not give too much, because that is usually what the nephritic does; he takes too much food.

DR. HENRY L. GOWENS, Philadelphia: The statement of Dr. Wurtz in regard to sugar being found in the urine in cases of brain tumor recalls to my mind the fact that it has been found in the urine following the instillation of homatropin. I mention that now, because in acute cases sugar may be found, while the amount may not be increased in the chronic cases, being due to the instillation of homatropin for the purpose of an ocular examination.

DR. JOHN G. WURTZ, Pittsburgh, closing the discussion: I wish to repeat that I believe that modern biological chemistry will be of great value. I should like to emphasize this, for the reason that chemistry is such an exact science that we can-

not very well get around it. For instance, taking the total nitrogen estimation of the sweat, and also estimating the amount of chlorides in the sweat, and finding that in this sweat the nitrogen eliminated from the body through the skin is practically nil; whereas the chlorides amount to a great deal. There is chloride retention in edema, and one way to get the chlorides out of the blood in such cases is by means of sweat. I remember that once, when we had a case of uremia, we would give an infusion of salt solution with hypodermoclysis and sweat the patient. According to the latest findings, the sweating is no good. The infusion would have been all right. It is all right to keep the body warm, but the hypodermoclysis, or infusion of salt solution, is the ideal treatment, because the kidneys cannot eliminate concentrated urine. One of the methods of treatment for nitrogen retention is to diminish the intake of nitrogen and to increase the water intake. That dilutes the blood, and the nitrogen in the blood, so that the kidney can eliminate the nitrogen. The amount found in the blood is practically the same as the amount in the muscles, so it is a question of washing out the system.

With reference to the remark of Dr. Gowen's that brain tumors will cause an increase of sugar in the urine and blood, and his mention of homatropin, I would say that there is an article on the production of glycosuria in dogs by the administration of morphine in large doses.

PATHOLOGY OF NEUROLOGICAL SIGNS AND SYMPTOMS.

BY

DR. CHARLES A. LEY, PITTSBURGH, PA.

THE activities of the nervous system give rise to two classes of phenomena, those pertaining to the body and those pertaining to the mind. In this paper, only those of the body will be taken up—and they may be divided into focal and general manifestations.

The central nervous system must receive a sufficient supply of blood in order to functionate properly. The respiratory center, for example, is extremely sensitive to any change in the quantity and quality of the blood that comes to it. The cerebral cortex is not affected until sometime after the medulla, at which time consciousness becomes clouded and the horrible sense of suffocation is diminished or lost. In chronic circula-

tory derangements, however, it is often remarkable how well the brain can accommodate itself to an insufficient blood supply and what little effect is produced by this condition or by a most pronounced venous stasis. The temporary loss of consciousness known as fainting is usually due to an acute cerebral anemia. It may occur in strong and healthy individuals, but it is much more frequent in anemic girls or in older individuals with degeneration of the cerebral arteries. You are well acquainted with the symptoms of fainting. Although the cerebrum has ceased to act, the medulla appears to perform its functions quite normally, just as it does during light narcosis. It seems probable, therefore, that the anemia causing syncope affects only a part of the brain, in other words, it is a circumscribed circulatory derangement.

Other anemic manifestations of nervous origin are more difficult to explain. Some, such as headache, ringing in the ears, spots before the eyes and dizziness, appear to be irritative in character; while others such as the common feeling of lassitude, are depressive. These symptoms are generally ascribed to a cerebral anemia which either diminishes the oxygen supply to the brain or affects its nutrition in some other way; but these suppositions have not been definitely proven. There are many other possibilities. Chemical substances, resulting from pathological alterations of the general metabolism—may poison the brain in some manner; and it is even possible that the symptoms do not originate in the brain at all, but in the peripheral sense organs. The headache and dizziness of chlorosis may be associated with an increase in the subarachnoid pressure.

The brain and spinal cord are suspended in a fluid that is constantly changing through the processes of secretion and absorption. I need not describe the many advantages of this mechanism. Most observers have found the pressure of the cerebrospinal fluid to be normally rather low, although it apparently varies considerably in different individuals. Its height depends in part upon the general blood pressure, but mainly upon the relation that exists between the secretion and the absorption of the lymph. The composition of the cerebrospinal fluid shows that it is not an ordinary transudate but a secretory product from certain cells, probably those of the choroid plexuses. The resorption of this fluid takes place main-

ly in the pacchionian corpuscles and to a lesser extent in the lymphatics of the nose and neck.

The pressure of the cerebrospinal fluid may be pathologically increased to varying degrees and by different causes. For example, tumors may bring this about merely because they take up space within the cranial cavity, though they are especially liable to do so when they press upon the veins of Galien and thus impede the outflow of venous blood. Intracranial hemorrhages may also increase the cerebrospinal pressure.

If the cranial cavity becomes crowded from any cause, the brain substance cannot be compressed into a smaller space, for the nervous tissue is practically incompressible. A certain relief is afforded, however, by the escape of cerebrospinal fluid into those portions of the dura mater that are comparatively distensible, such as is the dura of the cord. A new equilibrium of pressure is then established. What the new pressure will be depends upon the size of the compressing agent, the distensibility of the dura and finally, upon the relation that exists between the secretion and the absorption of cerebrospinal fluid. It is apparent that when so many factors enter into the final result the same cause may produce quite different effects in different individuals. From these considerations it would appear that when a hard body is added to the contents of the skull the increase in pressure would be roughly proportionate to the size of the "foreign body," and that the space taken up by smaller bodies could be fairly well compensated for by the escape of lymph from the cranial cavity. This definite relationship does not always hold good with tumors; it would seem that location and not size had more effect in the production of increased pressures. The production or absorption of fluid seems to be directly affected, possibly by inflammation. Fluid in these cases usually contains an excess of albumin. Choked disk is almost certainly of an inflammatory nature.

In meningitis the increased cerebral pressure is caused by a disturbance in the balance between the production and absorption of c. s. fluid. It seems probable, indeed, that both the production is increased and the absorption is diminished in this condition.

The chronic hydrocephalus of children is characterized by a large collection of cerebrospinal fluid, but its cause is not well understood. Perhaps a mild ependymitis is present,

though this seems improbable in most cases, from the fact that the percentage of albumin in the fluid is not increased. Chlorotic girls frequently show an increased intracranial pressure, yet here again the cause is very uncertain. The mild optic neuritis often seen in these patients may possibly be produced by the increased cerebral pressure, though it seems more probable that it results directly from the poor nutrition of the optic nerve. That the headache accompanying cases of arterial hypertension (nephritis, arterio-sclerosis) is often the result of an increased cerebral pressure is evidenced by the benefit seen in many instances after a lumbar puncture.

When the pressure of the cerebrospinal fluid is increased from any of these causes, certain symptoms usually follow, among which are headache, general bodily and psychic weakness, and characteristic alterations in the ocular fundi, the so-called choked disks. These have been termed the symptoms of latent cerebral pressure.

According to our present understanding, two factors contribute to the causation of choked discs: First, an increase in the pressure of the fluid within the optic sheath; and, secondly, some unknown inflammatory agent. This would explain many peculiar cases in which a choked disk is absent even though the intracranial pressure is high, as happens in some cases of hydrocephalus: here it would appear that the inflammatory factor is absent. On the other hand, in intracranial conditions of slow development, such as in certain abscesses and tumors, choked disk is often absent because there is no increase in intracranial tension.

If the pressure of the cerebrospinal fluid be still increased, a second series of phenomena develop; the so-called direct, or manifest, symptoms of cerebral pressure. The essential cause of these is a disturbance of the cerebral circulation. From experimental data, it would appear that the really characteristic symptoms of cerebral compression only begin at about the time when the intracranial pressure becomes sufficient to compress the arteries. It is then that we have the characteristic stupor, the vomiting, the slowing of the pulse and the respiration, and finally epileptiform convulsions. (Arterial anæmia—increased arachoid pressure). The absolute amount of cerebral pressure necessary to produce these direct symptoms is indefinite. According to Cushing, a continuation of life after compression of the cerebral arteries

has once taken place, is made possible only by an increase in arterial pressure.

The recent tendency, it would seem, has been to emphasize the circulatory basis of the manifestations of increased intracranial pressure, thereby underestimating the importance of changes in the brain substance itself as the cause.

Concussion—The symptoms of cerebral concussion differ considerably from those of compression. The pale unconscious patient lies with relaxed muscles and with weak respirations. His pulse is soft and small, its rate being either increased or diminished. His pupils are often immobile; and vomiting frequently occurs. Indeed, he might be thought to be suffering from a fainting spell. No definite anatomical changes in the brain common to all cases of concussion, have been found. The symptoms can hardly be due to circulatory disturbances, for they have been produced on bloodless frogs. It seems quite probable that they are caused by injuries to the finer connections between the nerve cells in the brain, and we know that very severe concussions may even produce slight but demonstrable lesions in the central nervous system.

Cerebral Hemorrhage and Embolism—Closely related to the manifestations of increased intracranial pressure are those associated with disturbances in the cerebral arteries, and known as cerebral insult. Apoplexy is generally due to alterations in the vessel walls—the so-called miliary aneurisms. The latter, under the influence of an augmented blood pressure, or even with a normal tension, rupture and permit of an escape of blood into the surrounding tissues. The extent of the hemorrhage and its rapidity of formation depend upon the size of the vessel and of the opening in its wall. The severity of the picture varies with the increase in intracranial pressure and with the amount of the extravasation. There is ordinarily a loss of consciousness and a slowing of the pulse and respirations. The early fall in temperature is succeeded by a rise. Death often occurs without a return of consciousness.

These symptoms are the direct result of the cerebral trauma, consequent to the extravasation of blood; added to the extensive destruction of brain tissue is the damage wrought by the increase in intracranial tension. In other cases, the insult is gradual in nature, probably because only a small amount of blood escapes at one time, in which event the actual destruction of tissue is slight and the increase in tension is slow and

limited. In those cases in which the insult is entirely absent, the hemorrhage has been small and gradual, and the tissue destruction and increase in tension is significant, for here the cerebrospinal fluid has had time to distribute itself elsewhere. As the vessels of the cortex are smaller, and exhibit a lower pressure than do those of the base, a rupture of the former is attended with less pronounced insult manifestations.

The symptoms consequent upon a sudden closure of a cerebral vessel are so similar to those associated with a hemorrhage as often to be indistinguishable from them. Marchand has pointed out, the closure of a cerebral artery is quickly followed by a stasis in the neighboring capillaries and veins. The anemia of certain parts of the brain thereby produced, accounts in all likelihood for the loss of consciousness. The next stage is one of edema, to which are due the symptoms of increased pressure. The focal symptoms accompanying hemorrhage and embolism depend upon the location of the tissue injury, just as is the case with tumors.

Conditions producing changes in the motor tracts, show certain signs of a pathological nature. You will remember that the motor fibers extend from the cerebral cortex to the peripheral nerves. Also that it is composed of two sets of fibers. The first or upper beginning in the motor cortex and extending to the cells in the anterior horn and medulla; and the second or lower extending from the anterior horn and medulla to the peripheral termination in the muscles. Any irritation or inflammatory process affecting the upper neurone is followed by increase of the deep reflexes—namely exaggerated tendon reflexes with clonus if very severe—and Babinski phenomena. It has been generally held that the influence of this upper neurone on the lower was one of inhibition; however, recent investigation tends to show that it is rather one of acceleration. Fibers coming from the cortex show spastic paralysis; those by way of the basal ganglia athetoid movement, those passing via the superior cerebellar tracts choreiform movements, and those of the cerebellum are ataxic in type.

Sensation in its various forms is affected by lesions anywhere in the course of the nerves—the posterior roots, or the ganglia, also by lesions in certain areas of the cord. Interference with this tract produces loss of sensation and abolishes tendon reflexes. If the lesion is in the nerve, posterior ganglion or involves the posterior columns completely there is a

loss of all forms of sensibility. A lesion affecting the lateral tracts just anterior to the crossed pyramidal fibers would cause a loss of the pain and temperature senses. One in the anterior columns external to the direct pyramidal tract would show only a loss of tactile and pressure sense on the contra lateral side.

Atrophy of the muscles due to lesion in the cord is caused by a complete separation of the nerve cell from its neuron.

DISCUSSION ON DR. LEY'S PAPER.

DR. FRANK O. NAGLE, Philadelphia: To explain in detail the mechanism of a choked disc, it is necessary to understand, first, that the skull is a hermetically sealed part with but two outlets. Increased intracranial pressure must have an outlet in one or other of these two directions, and all cases of tumor will sooner or later produce choked disc. Cushing is authority for that statement. So far as size is concerned, size has nothing to do with it. A small tumor, if in the cortex, especially in the posterial fossa, will produce choked disc. Another reason is that the tegmentum cerebelli is a thick, unyielding capsule, so that compression is impossible. Choked disc is dependent on whether the tumor is a suppurating process, a destructive process, or a compression merely. Sarcoma produces choked disc early. Tubercular abscess or meningitis does not produce it. Glioma is an infiltrating process, and comes secondary to a sarcoma.

As far as theories are concerned, the inflammatory theory is the old one. In other words, this theory is that choked disc is dependent on material around the eyeball which produces swelling. But under the microscope, you never see any inflammatory reaction. On the other hand, the most generally accepted theory now is the mechanical theory of the production of choked disc. It is a mechanical construction, which causes a terrific swelling for a distance of six millimeters in height, or two diopters of choked disc.

On the other hand, take tumors such as the hypophysis: Because of their location close to the chiasm, they close off mechanically the meninges surrounding the optic nerve, so that fluid can not pass down the optic nerve: and we do not have choked disc, but a virtual primary optic atrophy. Other conditions that may cause choked disc are cysticercus, syphilis and hydrocephalus, mechanically produced: and chronic inter-

stitital nephritis. As a matter of fact, Cushing recommends lumbar puncture in all conditions of chronic interstitial nephritis where the vision begins to fail, before the presence of choked disc.

DR. ANNA C. CLARKE, Scranton: A case recently came to my attention after passing through the hands of three men, two of whom had diagnosed the condition as beginning cataract, and the third thought it was and sent the case to me. The daughter of the woman said to me, "Mother does her hair up so strangely; I wonder whether that could have anything to do with the condition of her eye?" The patient took off her hat, and I found that her hair was piled high on her head. She said, "That is not all hair." I found that there was a tumor, which proved to be a sarcoma. Upon its removal, a piece of skull came away. It relieved the pressure, and the eyes cleared up. The patient made temporarily a satisfactory recovery.

DR. CLARENCE BARTLETT, Philadelphia: Did I understand Dr. Nagle to say that all cases of brain tumor would, some time in their course, produce optic neuritis or choked disc?

DR. NAGLE: Yes.

DR. BARTLETT: Absolutely, I think that is a dangerous doctrine, because I have seen so many cases in which there was none. You might say that my cases were not examined closely enough. That, of course, is true. They may not have been examined at sufficiently short intervals or over an extended enough period of time. In that case, the question becomes a practical one. Academically, Dr. Nagle's statement, quoted from Cushing, would be right; but I have unquestionably followed cases of brain tumor from the earliest stage to death and autopsy, with never a vestige of a visual symptom. The majority, of course, do have symptoms of the fundus: and choked disc is unquestionably a most valuable symptom—a very important one, and practically pathognomonic, when it exists. But to make it an absolute one, invariably present, is misleading.

DR. NAGLE: I believe that Cushing meant that before death choked disc is present.

DR. BARTLETT: Do you believe that choked disc can disappear and leave no signs that a good ophthalmologist can discover?

DR. NAGLE: At one time, they used to lay a great deal

of stress on whether it was on one side or the other. Now we discount that. The greatest swelling may be on the opposite side from the tumor.

DR. BARTLETT: I have found that also. The swelling has no relation to the side on which the tumor exists.

DR. CHARLES A. LEY, Pittsburgh, closing: In a paper of this type, it is pretty hard to go into the thing thoroughly; but the discussion has been more or less on choked disc. Every nerve man has cases that come to him, of brain tumor, brain abscess, or disturbances with the brain, in which he is at a loss to make the correct diagnosis. The point that I feel is of importance about choked disc is that the choked disc is always present with conditions at the base of the brain, where the pressure is exerted upon the apices, so that we have retention of fluid in the retina. If the condition is in the brain, with a glioma of this nature, infiltrating and slow of growth, the condition may go on for years without a sign of disturbance in the eye. I had a case two weeks ago, with an osteoma of the orbit that did not produce any disturbance in the retina. The patient had a physiological cupped disc. Dr. Metzger looked at him, and found the eye perfectly normal. He had a paralytic condition in the third, fourth and fifth nerves. The X-ray showed the picture thoroughly. We operated and removed the pressure, and the man is better. He has got the use of the muscles of the eye almost completely, those supplied by the third nerve. When we come down to figure out why, there are a good many pros and cons in the production of symptoms in the cranial cavity. It is an individual proposition for each case that comes along.

A CASE OF EPILEPSY.

BY

F. H. LUTZE, M.D., BROOKLYN, N. Y.

MISS HAZEL F., age 15 years, was brought to me a sufferer from epilepsy, and I understood the disease to be of recent origin. She would fall to the floor when standing or sitting, unconscious, the face become blue, jerking of the limbs and foam at the mouth.

December 16, 1916.—Cuprum met, cm., having learned from experience that the higher potencies act much better in

such cases than the lower, the latter often aggravate the trouble.

January 3, 1917—The attacks are worse, more severe and of longer duration; vomits at times a greenish mucous before the seizures. *Sac. lac.*

January 10, 1917—I now learn that the patient has been treated by allopathic doctors before coming to me, and no doubt has been given potassium bro., which probably caused the blue discoloration of the face. There is no improvement. *Nux vom.* 200. Advised them to pay more attention to her, especially during the attacks, to obtain more and better symptoms.

February 6th—There is no more vomiting but she keeps swallowing during the attack as if something stuck in her throat that would not go down, and jerks less with her limbs, but spreads her legs apart. Her abdomen is rather large, the navel red and inflamed and covered with white scales, discharging pus and painful to touch. After the attack she is despondent; thinks she will never get well again. *Calcarea carb.* 200.

May 12th—A slow but steady improvement followed after *Ca. cc.* given in varying potencies, a powder every three or four days; the attacks are much milder and less often, but the navel troubles her very much and seems worse. Covered with white scales. *Arsenicum* 41 m., a powder every third day.

June 4th—Feels fine and had no convulsions since. The menses have appeared again after having been absent for a long time, but appear every two weeks, the flow is red but thin, watery. *Phos.* 200.

June 26th—Menses still too frequent but darker and with dark clots, and profuse. *Pulsatilla* 200.

July 2nd—Menses bright red, very copious, and too early. *Calc. ars.* 30.

July 26th—Sleepless and restless before midnight, tossing in bed. *Puls.* 1m.

August 5th—Feels better, but likes the warmth of this weather. *Silica* cm.

August 26th—Feels and is well in all respects, sleep, menses and navel, and had no sign of convulsions since May last.

On December 15, 1917, I received a letter which I still

have from her mother, thanking me very heartily for having cured her daughter, Hazel, of epileptic convulsions in six months, after she had been treated by allopathic doctors for these previous three years, without obtaining the least relief from them, but often getting very much worse for months at a time.

Miss Hazel remains well to this day, November 10, 1918.

INFLAMMATION OF THE SPINAL CORD.

BY

F. H. LUTZE, M.D., BROOKLYN, N. Y.

MRS. A. S., age 24 years, was married in her 19th year and soon thereafter began to feel ill and gradually got worse. A doctor was called who said she had rheumatism, and treated her for some time, but as the lady got steadily worse, another doctor was called, who agreed with the first one's diagnosis, but the patient continued to become worse. Then three more doctors were called in, one after the other. All called it rheumatism, but none of them could give any relief to the patient, therefore, the last doctor ordered her to a hospital for electrical treatment, assuring the family that this was the only way she could get cured. But the family as well as the patient objected to this and a neighbor recommended me, I was called to attend the case.

When informed that all the doctors who had treated her had called her disease rheumatism, I also accepted that diagnosis. I saw that she was paralyzed, but ascribed this to the dose of morphia she had been given every evening of late, to cause her to sleep at night, and gave her *nux vom.* 30, to antidote this and other remedies she had been given. But when after two weeks of this treatment there was no improvement, she could neither rise from lying or sitting, or stand alone without much assistance, I was convinced that this nearly complete paralysis must be due to some disease of the spinal cord, inquired into her history and examined her thoroughly after that.

I was informed that she had never been sick before, but very healthy until shortly before her marriage, when she was thrown from a carriage, striking the pavement square on her

back, but did not suffer from this, only slightly at that time but soon was all right, until some months after her marriage when the back commenced to pain her, worse at night. Could not lie on it in bed. On examining her back I found her to be extremely tender to touch over the entire spinal column, with very perceptible heat there, due to an inflammation of the spinal cord. She was worse at night, irritable and very sensitive to noise.

June 12th—Bell. 200. Improvement followed in a few days and continued by giving her bell. 200 in aqua, a dose every few days.

July 12th—She is much better, but a diarrhoea set in, the stools being nearly black, painless and frequent, with great thirst, drinking often and much at a time. Natrum mur. 200.

July 22nd—The stools are normal again but the spinal cord is worse and very painful, sleepless at night. Bell. 200 in aqua.

July 30th—Spinal cord improved very much but now a cough set in, so severe that people living in the same house told me I need not think that I could cure her, for she had consumption, as I would know if I could only hear her cough at night. The cough was caused by a feeling of a lump in her throat which she tried to expel. It was worse after midnight and then dry, but loose by day with thick, putrid, yellowish sputa. Calcarea carb., the chronic of bell. at first in aqua, daily; later on dry on the tongue, a powder every few days, restored her gradually to health, and six months from the beginning of my treatment she was fully restored to health and remains so to this day.

POLYARTHRITIS DURING ARSENOBENZOL TREATMENT.—Chabanier and Bleton (*Presse Medicale*), state that during the treatment of syphilitics with the arsenobenzols, especially the neo variety, there appears rather frequently a general polyarthralgia, localized mainly around the joints, and occurring under the same circumstances as icterus and neurorecurrences. The pains last three or four weeks, and are apparently not influenced by the treatment, which can be resumed as soon as they have disappeared. Since such pains are sometimes noticed in non-syphilitic individuals subjected to arsenobenzol therapy, they are probably to be ascribed rather to a direct action of the drug than to a localization of the syphilitic infection about the joints under the influence of the treatment.—*Charlotte Medical Journal*.

EDITORIAL

CHANGES IN THE EDITORIAL AND BUSINESS MANAGEMENT.

WE regret to announce that, owing to the increased demands made upon their time by professional and educational work, Dr. G. Harlan Wells and Dr. William M. Hillegas, respectively the editor and business manager of *THE HAHNEMANNIAN MONTHLY*, have been compelled to resign from active work on the journal.

Dr. Wells has been connected with the editorial work of *THE HAHNEMANNIAN MONTHLY* for a period of fourteen years. In 1905 he was made associate editor and in 1912 was made editor-in-chief. Those of us who have been associated with Dr. Wells in the editorial work of the journal have fully appreciated the sacrifices he has been called upon to make in order to carry it on in conjunction with his professional practice, his clinics and lectures as Clinical Professor of Medicine in the Hahnemann Medical College. As long as it was possible, however, he continued the work, feeling it to be his duty to make his contribution to the activities of the Homœopathic Medical Society of the State of Pennsylvania. Conditions arising out of the war, however, have made so many demands upon his time that he has felt that he could no longer continue the work of the journal and at the same time do justice to his other duties.

Dr. Hillegas assumed the duties of business manager in 1914 and since that time he has carried out this department of the work faithfully and efficiently, despite the many difficulties that have arisen during the past two years. The average physician has little conception of what the cutting out of medical advertising, the falling off of subscriptions due to physicians enlisting in military service, and the enormous increase in the cost of paper and printing has meant to medical journals. The handling of these problems naturally devolves on the business manager and Dr. Hillegas has met them in a way that has maintained the financial standing of

the Journal and reflected credit on his efforts. In February, 1918, Dr. Hillegas was appointed by Governor Brumbaugh a member of the Board of Medical Education and Licensure of the State of Pennsylvania. He has entered into this work with the same zeal and enthusiasm that he has displayed in all the other activities of his life and we regret that he has been compelled to reach the conclusion that it is impossible for him to carry on any duties except his professional practice and his work in connection with medical education as a member of the Board.

RALPH BERNSTEIN.

WORKMEN'S COMPENSATION LAW.

At the coming session of the Pennsylvania State Legislature, the Workmen's Compensation Law is going to be remodeled. Practically every doctor and surgeon in this State has suffered from the injustice of the present law due to the limitations in the amount of fees allowed under its action.

The first Workmen's Compensation Law in the United States was passed in 1912. The Pennsylvania law was passed in 1915, and it has not been changed since. Having been written so early in this type of sociological activity, it is indeed imperfect and the commission in charge of the administration of the law admits this. However, they seem unwilling to see the justice of the objections of the medical profession.

There are thirty-eight States that now have some form of Workmen's Compensation and the writer is told that in many of these the law as administered in Pennsylvania is regarded as the worst in the country. Two years ago, attempts were made to amend the Act in the Legislature but were defeated on the plea that while the law might not be perfect in every respect it was too soon to change it. The inclusion of a physician on the commission is one of the two points necessary to secure justice for the medical profession. The other is the alteration of the scale of fees so as to insure adequate remuneration for medical and surgical attention under this Act. If you wish to get results, it behooves each of you physicians to see personally the members of the Legislature in your county before the opening session, January 20th. For some reason rather difficult to understand, many legislators

and especially those of country districts seem deaf to any argument or plea of the medical profession. No matter how active a lobby in Harrisburg, the personal suasion of medical societies and doctors at home with the individual legislator is of far more importance. If you have any personal interest in the matter, and you should have, get busy at once, or no amendments of value to the medical profession will be added to the law.

W. M. H.

MEDICAL FAKERS.

ALL efforts to enforce any Medical Practice Act in any State has always uncovered many medical fakers, who have been reaping large amounts of money by arrant, ignorant quackery. Many of them are advertising charlatans, some with fixed offices, and others appearing "for one day only," all making extravagant claims of curative skill—and all getting big money from gullible people, frequently foreigners.

There appear to be more fakers and charlatans in medicine than in any other profession—and more irregularly connected with its practice. This should not be and in Pennsylvania the State Board of Medical Education and Licensure is trying to weed out these irregular practitioners. There is a clause in the Medical Practice Act making illegal practice a crime and this can be enforced best by co-operation of local county societies with the bureau. On notification the bureau will be glad to aid in or take charge of the arrest and trial of such malefactors. The Allopathic State Medical Society is contemplating engaging a full time doctor to travel through the State for the purpose of detection and weeding out of the charlatans. If the medical profession would only recognize the need of far better organization, much could be accomplished in so many ways for the good of all doctors. Trades unions have the active support of workmen, who recognize their value. The bureau believes that it should have the hearty backing of all regularly licensed physicians in this matter and notable advances could soon be made toward clearing the State of unlicensed practitioners. The question has been raised in Illinois in reference to the value or advantage of annual registration of doctors and it will be raised here

soon. Personally, the writer favors it. The amount of the fee—which would be nominal, only one or two dollars, is too small to be considered, but the amount could be well used by the State in the detection and prosecution of the illegal practitioners.

The many advantages of enabling the bureau to keep in touch with legally licensed practitioners must be and are apparent to all, and there can be no question as to the need of thorough supervision of those who claim the privileges of physicians. The only objectors will be the charlatans and illegal practitioners and the unethical men who fear exposure.

W. M. H.

SIMPLE TREATMENT OF SCABIES.—G. Milian (*Paris Medical*, May 18, 1918) lays stress on the importance of scabies in war practice. He thinks two army corps may yield as many as 500 cases every month, thus removing a large force from active service and entailing great expense for treatment. The official course of treatment, he finds, is too complicated and is frequently misapplied by the attendants. The chief source of difficulty is that sulphur being insoluble, does not penetrate the skin, yet must be brought in direct contact with the parasites if successful results are to be obtained. Milian's simplified treatment is based on the use of a soluble sulphur preparation, and this does away with the necessity not only of the preliminary rubbing with soft soap and the hot bath, but also of the rubbing in of the sulphur itself, and even of the disinfection of the clothes—if the patient can continue to wear the latter during the treatment. The ointment employed is made by mixing 250 grams each of petrolatum and wool fat, incorporating with them a solution of fifty grams of potassium polysulphide in 250 grams of water, and adding five grams of zinc oxide and 200 grams of liquid petrolatum. The odor of this ointment persists only half an hour. The patient first rubs himself with soap in a shower bath or takes an ordinary cleansing bath. The entire surface of the body, with the exception of the head, is then covered with the ointment and the patient dons the same clothes he had on before. For greater certainty, a second inunction may be carried out the next day. On the third day the body is well washed with soap to remove the ointment. The underwear is then changed and, if possible, also the sheets. The ointment is less irritating than those hitherto used and can be used even where furunculosis or extensive impetigo coexists. In the first three or four days the lesions of scabies become larger, due to edema, but the parasites upon examination are found to be dead. In about one case in fifty, viz. in susceptible subjects and those insufficiently cleansed with soap on the third day, a harmless eruption of small papules on the trunk, lasting five to six days, may be noted. In cases with impetigo or furunculosis already present, a paste of equal parts of zinc oxide, petrolatum, and wool fat should be applied locally.

GLEANINGS

INFLUENCE OF MENSTRUATION ON ACIDOSIS IN DIABETES MELLITUS.—A girl, aged 18, entered the hospital suffering from a very severe type of diabetes mellitus, accompanied by a marked degree of acidosis. The urine could be rendered sugar-free only temporarily by means of starvation; the acid substances in the urine were fairly high, the percentage of ammonia nitrogen of the total urinary nitrogen was well above the normal, and the carbon dioxid tension of the alveolar air was low, in spite of large amounts of bicarbonate of soda administered. The patient was thin and weak, but exhibited none of the distressing subjective symptoms that are often associated with marked acidosis and impending diabetic coma. The gravity of the situation was realized, and every effort was made to improve the girl's condition. At the end of one month, the acidosis had somewhat diminished, but the tolerance for carbohydrates had not increased at all. She was evidently one of the rare but unfortunate cases of diabetes mellitus which are not relieved by the starvation treatment. With the onset of the menstrual period, the picture changed completely. On that day she complained of abdominal pain and refused food. At 7 p. m. a change in the character of the breathing with increasing drowsiness was noticed, and at 10 p. m. there was well marked hyperpnea; she could scarcely be aroused; there was marked involuntary twitching of the facial muscles, and the carbon dioxid tension of the alveolar air was 20 mm.

The next day the symptoms remained unchanged. On the third day the conditions improved somewhat and on the fourth day all the symptoms which had manifested themselves at the time menstruation began had disappeared. The patient was treated with large doses of sodium bicarbonate by the mouth, rectum, and intravenously, and by starvation. The effects of this therapy were satisfactory. The tests during this period, which may be regarded as one of diabetic coma, show no appreciable increase in the severity of the acidosis over that of one month previously when there were no subjective symptoms of acidosis. There is perhaps a slight tendency toward a rise in the amount of acid substances and ammonia, but no significant change occurred. The alveolar air showed a lower tension of carbon dioxid on the first day of menstruation than had previously been recorded, but here again the difference was only slight. It may, therefore, be concluded that the process of menstruation in some manner affected the body so that it was less resistant to the influences of the acid bodies and that diabetic coma resulted.

There are several other facts that point to the profound effects which were produced by the menstrual process. During the period the glycosuria and the quantity of nitrogen in the urine were both much increased. These phenomena have often been noted in so-called cases of acute diabetes. When menstruation had ceased, it was apparent that some permanent damage to the carbohydrate metabolism had occurred. The amounts of glucose excreted were somewhat higher than before, and the acidosis, as indicated by

the acetonuria and the quantity of ammonia in the urine, was distinctly more pronounced. In this case of diabetes mellitus it seems justified to conclude that the menstruation was accompanied by an increase in the acidosis. The symptoms became more marked with each successive period until fatal coma occurred. The second menstrual period set in four weeks after the first. The girl was very drowsy and nauseated. Deep coma came on during the course of the day, and on the following day several general convulsions occurred. There was evidently typical air hunger. Death came about thirty-six hours after the onset of the diabetic coma, and on the third day following the beginning of the menstrual period.—*Bulletin Johns Hopkins Hospital*.

LARGE VERSUS SMALL DOSES OF MEDICINAL AGENTS.—C. Fiessinger (*Bulletin de l'Academie de medecine*, July 2, 1918) divides drugs into three groups—the specifics and those acting mechanically, of which large doses are appropriate, and the symptomatic or functional remedies, the dosage of which, as customarily applied, is often too large. Digitalis, in its relation to myocardial contraction is a symptomatic and not a specific remedy, for the cause of the impairment of contraction continues in spite of it. Small and subcontinuous doses will gradually restore contractile power to the muscle, while large doses excite the muscle temporarily but then leave it insensitive. Risk of the latter effect begins above one-tenth milligram of French crystallized digitalin or one-tenth gram of powdered digitalis. Atropine sulphate will produce its effects in a dosage of only one to two tenths of a milligram. Opium in large doses prolongs bronchitis when it arrests cough, and weakens the myocardium in heart cases. Hypnotics combat insomnia among the nervous while increasing their restlessness by day. Chloral hydrate, 0.5 gram, will procure sleep as well as two grams. The task should be undertaken of determining for each drug not only the maximum dose of the formularies, which is the last guidepost before the lethal dose, but the smallest dose and also the zone of beginning risk.

TREATMENT OF INFECTIONS AND INFECTED WOUNDS WITH DICHLORAMIN-T.—At present, records have been obtained by the authors from 19,040 completed cases in civil surgical practice which have been treated with dichloramin-T during the last fifteen months. These patients have been treated in the Pennsylvania, the University of Pennsylvania, Germantown, Children's and Bryn Mawr hospitals and the accident services of the Midvale Steel Works and the Remington Arms Company. After these fifteen months' investigation they feel that the use of dichloramin-T has definitely improved the results they have obtained in the primary closure of traumatic wounds of the soft tissues, bones and joints. In the treatment of superficial accessible infections dichloramin-T has uniformly given them better results than any other germicide they have employed, and that the method of its application is simpler and the dressings more economical than with any of the other chlorin agents.

The best results with dichloramin-T can only be obtained when actual chemical contact of the germicide with the infecting organism is maintained. To maintain such contact in superficial surgical infections is a simple matter, and in the first few months of the work a satisfactory technic for this class of wounds was developed. In deep and inaccessible infections the problem is more difficult, and the greater part of the fifteen months has been devoted to this aspect. The confidence in the germicidal value of dichloramin-T has

so developed that when it does not control infection the authors feel that the chemical contact has not been maintained, the mass of the germicide employed has not been sufficient, or adequate surgical treatment has not been given.

The striking detoxicating effect of the chlorin group of agents which has become common knowledge through the general use of neutral solution of chlorinated soda is just as satisfactorily exhibited with dichloramin-T. Dichloramin, unlike the aqueous hypochlorite solution, has no effect on the knots of catgut ligatures and no disintegrating effect on the catgut itself. The occurrence of secondary hemorrhages in wounds treated by the Carrel method was not uncommon in their experience at the American Ambulance. Major Sweet reports that, in his 1,200 cases of major infected military wounds, there was not one secondary hemorrhage.

The authors say that too great stress cannot be laid on the value of dichloramin as a deodorant dressing. The absence of the usual disagreeable odors in their wards, containing cases with fecal fistulas, is a general observation. During the last two months it has been used routinely in the wards of the Oncological Hospital in Philadelphia. Where formerly these putrid, sloughing, malignant tissues were irrigated every two hours with all kinds of solutions, with indifferent success in the control of infection and with a persistence of the offensive odor, now they are packed lightly every six hours with gauze saturated with a 5 per cent. solution of dichloramin-T. Dr. Gordon Saxon reports that not only has the odor disappeared entirely, but the wound infections have been controlled.—*Military Surgeon.*

SOAMINE IN BRONCHIAL ASTHMA.—B. N. Ghosh (*Glasgow Medical Journal* June, 1918) recommends soamine in the interval treatment of true bronchial asthma. Some few cases improved on autogenous mixed vaccine, but several cases that improved with soamine failed to improve with vaccines. The cause of irritation giving rise to reflex paroxysms should always be sought. In cases in which egg albumen brings on asthma or urticaria, marked improvement occurs under calcium lactate and soamine. Cases showing no increase of eosinophiles in the blood do not improve under soamine, but these cases are few. The plan of treatment consists in giving one grain of soamine by hypodermic injection and increasing one grain with each injection until three grains are reached. At first the injections are given twice a week, and later, as the conditions improve, once a week for two or three injections. If paroxysms do not appear during this period, an injection may be given once a fortnight, and then once a month for one or two more injections. The number of injections required to produce total absence of paroxysms varied from six to eighteen—rarely more. Some patients, who used to have paroxysms almost daily, have been free from any attack for over one year. The mode of administration consists in boiling one mil of water in a teaspoon, dissolving a soamine tabloid in it, and then injecting the solution in the arm, after local disinfection with tincture of iodine. The injection is not very painful; sometimes small nodular masses form, but these eventually disappear. No untoward results such as dimness of vision or albuminuria were ever noticed. Cases with chronic kidney lesions should, however, not be given the treatment.

SOME CAUSES OF FUNCTIONAL DISABILITY FOLLOWING FRACTURES.—H. W. Dachtler (*Amer. J. of R.* Vol. 5, No. 9, 1918, Pg. 457). The author gives a resume of 5,000 cases during eighteen years experience. There is no attempt at numerical classification, different types of fractures being considered. Loss and impairment of function seemed due, first to poor reduction, and, secondly, to too long a period of fixation.

Fractures of the metacarpals gave good results where reasonable reduction was obtained, which was best accomplished by dressing the hand clasping a cylinder two inches in diameter.

In fractures of the radial styloid into the joint, there was usually no deformity, and the best results were obtained without splinting. Later X-Ray examinations showed bony union to be slow, two to five years being the average time before the line of fracture had disappeared.

In discussing Colles's fractures, the author considered about 80 per cent. impacted and usually impossible to reduce without an anesthetic. He recommended the full flexed wrist position used by the late Dr. John Murphey, as a complete reduction is necessary in order to fully flex the wrist, and it was found much easier to extend the wrist after fixation than to flex it. The author advocated early passive motion, and the removal of the splint much sooner than is the usual practice, although he does not state the exact number of days. Where the fracture is not reduced, he thinks it preferable for the patient to use the wrist from the first, so as to insure function, rather than to add to deformity the loss of function which follows fixation.

Better function followed elbow injuries in children than in adults, probably because about 80 per cent. were above the joint. The loss of function in the adult elbow is largely due to new bone formation which occurs here after injury more frequently than in any other joint.

Fractures of the head of the radius are more common than suspected, and a majority of 150 cases examined were caused in the same way as a Colles's fracture, but never occurred in the same arm with a Colles's. Active motion, after the first few days, insured better function than fixation.

Fractures of the condyles of the humerus seldom resulted in loss of function unless there was dislocation. One case of dislocation of the head of the radius was cited, which recurred three times after reduction, until it was found that the ulna was fractured, and the overriding of the fragments prevented reduction of the dislocation; whereupon the ulna was plated to hold it in extension.

Marked fractures and dislocations of the vertebrae may be overlooked because they are followed by so little disability. The same is true of fractures of the pelvis.

Non-impacted fractures of the neck of the femur were mechanically fastened where age and condition of the patient warranted. If fixation is properly carried out, good function as well as weight bearing will be insured. Impacted fractures at the base of the neck of the femur usually united and gave good weight bearing function after six months; disability depending on the amount of shortening present.

Fractures through the trochanters united quickly, and, unless the lesser trochanter was displaced, gave good function.

Fractures of the knee usually showed some loss of function, due to weakening of the joint through injuries to the ligaments and cartilage.

Fracture of the middle third of the femur, with ends overriding and in

opposition, with the long axes of the parts parallel, gave good function even where the leg was shortened as much as two inches.

To prevent angular deformities of the upper and lower thirds of the femur, bone plating was, as a rule, necessary, although mechanical fixation is not advocated by the writer unless reduction is necessary to procure function, and cannot be obtained by any other means. Mechanical fixation should always be absolute, and, wherever possible, foreign bodies should be omitted. The most important function of the lower extremities is weight bearing, which, if retained even with moderate deformity, will assure locomotion.

Fracture of the femur just above the condyles, which is very liable to displacement, was successfully treated in the same manner as fractures of the lower end of the humerus, by superflexion. In a transverse fracture, if the leg is flexed the heel being well drawn back upon the buttock, no other fixation will be found necessary. In an oblique fracture, extension may be applied to the condyles of the femur to overcome shortening. Where a cast is applied, the knee may be kept upright in bed, allowing the weight of the leg to rest on the bottom of the foot. This full flexed position will be found comfortable by the patient.

The article lays special emphasis on the lack of necessity for splinting where there is no deformity nor bony crepitus; also that the best results are obtained when the joints are fixed in a flexed position, and fixation continued for a shorter period than has been the usual custom. The author asserts that bone operations should be considered the highest type of surgery, and not attempted by one who has not considerable mechanical skill.—*Walter C. Barker, M.D.*

TREATMENT OF ACUTE POLIOMYELITIS WITH IMMUNE HORSE SERUM.—E. C. Rosenow (*Journal A. M. A.*, August 10, 1918) presents further observations on the curative value of this serum and concludes that the results obtained in sporadic acute cases, as well as in the epidemic form of the disease, and in the experimental disease in rabbits are so striking as to leave little doubt of its merits. It is of the greatest importance in its use in treatment to recognize the poliomyelitis at the earliest moment. The characteristic syndrome of acute poliomyelitis should lead to immediate lumbar puncture for conclusive tests, but if there are symptoms suggesting involvement of the central nervous system and the spinal fluid shows increased abundance, increased cell content with a predominance of mononuclears and a positive globulin test, the serum should be given at once, no harm having thus been done should the further study of the case prove it not to have been poliomyelitis. In every instance the serum should be given intravenously and not into the spinal canal, since this mode of administration is not only more effective, but also because the injection into the spinal canal of horse serum may cause a reaction which will tend to increase the poliomyelitic involvement. The serum will be sent free to any one who desires to use it and who will furnish records of his cases.

THERAPEUTIC REFLECTIONS.—At this writing the influenza epidemic is decidedly on the wane and we may indulge in a little calm reflection. The disease, has so to speak, burned itself out, and now languishes for want of more human material. Those most susceptible or predisposed have as usual, succumbed; the immunes, on the other hand, have gone blissfully about their business, unscathed and untouched. Hence we may with safety predict that no such epidemic as this one has been will occur next year. That those who have had the disease are now immune there is no doubt, but how long this immunity will last no one can tell. The abstraction of the blood of immunes and the further injection of its serum into the veins of those still free from influenza has a scientific basis to commend it, inasmuch as in this manner we are furnishing *antibodies* by the wholesale as a prophylactic agent. The fly in the ointment, however, consists in the fact that we can never prove the efficacy of this alleged prophylaxis, and such artificially immunized subjects may never have contracted the disease anyway. Our own experience would seem to show that those who have always had careful homœopathic prescribing are the best resisters to infection, and that post-influenzal immunity can apparently be best established by the administration of occasional unit doses of *Tuberculinum* in ascending potencies.

An amusing phase of the epidemic has been the newspaper notoriety given the department of health. Glaring and overgrown headlines have informed us that "The Crest of the Wave" has been reached, according to the august announcement of the department head, only to find that the following day has deluged us with a mountainous wave of new cases. "The epidemic is now controlled" has been another favorite announcement. Just how controlled is not exactly clear, but since this pronouncement has been timed to coincide with the commencing wane of the disease we may be content to accept it for what it is worth and let it go at that.

The most frequently required remedies, both for the influenza and pneumonia, have been *Bryonia*, *Eupatorium perf.*, *Gelsemium*, *Phosphorus*, *Rhus tox.*, *Ferrum phosphoricum*, and *Iodine*. The indications for these are well known to us all. Of course, other remedies have also been indicated. Among others we saw a broncho-pneumonia which had begun upon and rapidly spread from the right side. The ten year old patient was doing nicely on *Phosphorus* when, without discoverable cause, a sudden extension of the disease to uninvolved lung tissue took place with a sharp rise of temperature. *Ferrum phos.* took the sharp edge off the violence, but did not check the process. A mahogany-red right cheek (upon which the child had not been lying, thank you) was sufficient to arouse our Sherlock Holmesian sense of the mysterious. Judicious diplomatic sparring revealed the fact that our little patient objected to having her feet warmly covered. This trinity of symptoms, flushed right cheek, wants feet cool, right-sided pulmonary complaints, was quite sufficient to serve as the foundation for our therapeutic stool.

Of course, *Sanguinaria can.* was given q., 3 hours, and in the ridiculous 200th. Within twelve hours the temperature dropped to normal and remained there. Gentle reader, we defy any O. S. man to perform the same stunt! It can't be done.

Neither can it be done by the routine prescriber, to whom pneumonia spells *Acon.*, *Bry.*, *Phos.* and *Ant. t.* Successful prescribing is an art and to master the art means more than a superficial knowledge of a few headliner keynotes in large type. Treat the patient, not the disease!—*Editorial, Hom. Recorder.*

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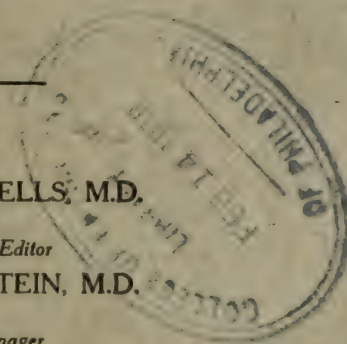
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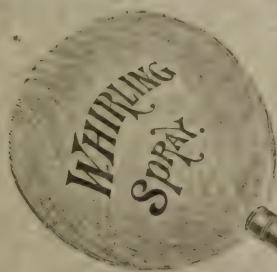
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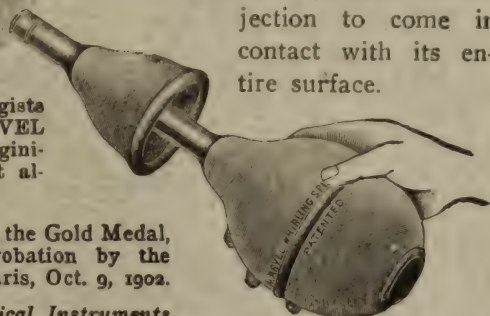
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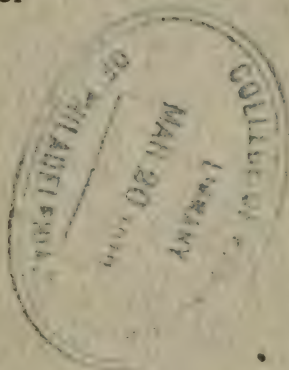
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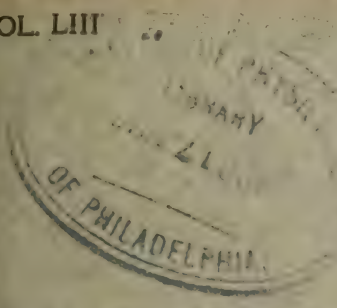
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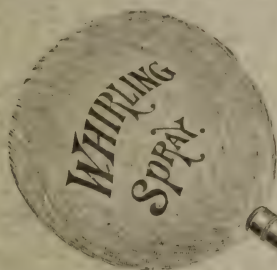
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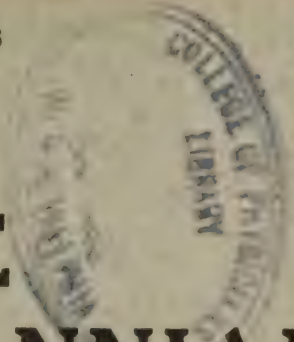
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OFFICIAL JOURNAL OF THE HOMOEOPATHIC
MEDICAL SOCIETY OF THE STATE OF
PENNSYLVANIA



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G. HARLAN WELLS, M.D.

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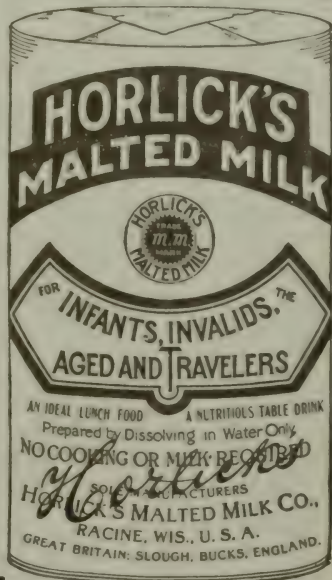
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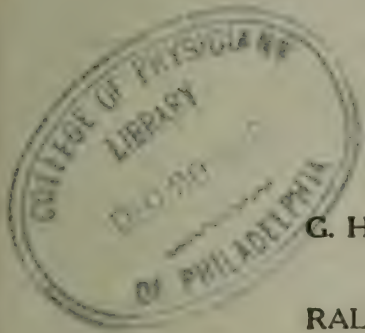
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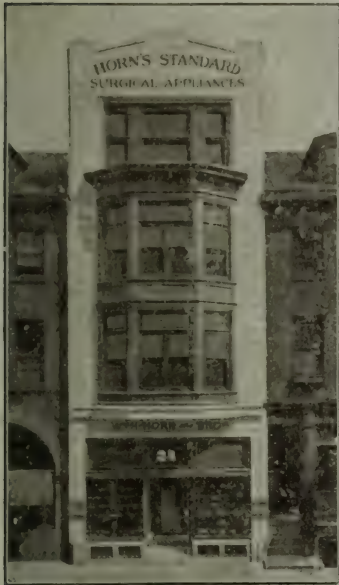
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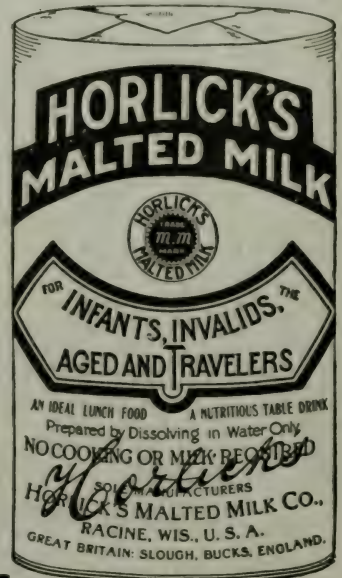
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